NORRAG SPECIAL ISSUE 08

The Education-Training-Work Continuums: Pathways to Socio-Professional Inclusion for Youth and Adults

International Labour Organization

NORRAG
Network for international policies and cooperation in education and training
Réseau sur les politiques et la coopération internationales en éducation et en formation

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The Education-Training-Work Continuums: Pathways to Socio-Professional Inclusion for Youth and Adults

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Foreword

The relationship between the worlds of education and training and work has been vexed. Each field builds the capabilities of the people inside it to different purposes. Each has its own norms and priorities which often overlap imperfectly with the others.

Are the worlds of education and training and work functionally separate and closed systems? What do we gain by treating them as such? And what do we lose? Most importantly, what is lost by the people that these systems are purported to serve? Can we achieve social justice when continuing to treat these systems as separate?

People who move in a linear trajectory – from education first then to training and then to work – tend to be more privileged than those who get stuck in the discontinuities between the systems. The trajectory of the so-called "professions" such as lawyers and doctors (in contrast to "trades") are set up for members of higher socio-economic status groups to move seamlessly from education, training and then into work.

Nevertheless, worldwide, the paths of people from lower socio-economic backgrounds, people of colour and women among others zigzag back and forth through these fields, with each of these groups more likely to move from, say, education to work to training and back to education and then work again and then to training before changing to a different kind of work. And this is compounded for the groups who sit at the intersections between these groups who are already marginalised on one dimension. This is to say nothing of subsistence working at the same time as being education and training to earn enough money to sustain the learner through the educational or training experience, nor of people who never have the chance of entering into or learning at schools at the age which has been deemed "appropriate" by the same authorities who then fail to provide appropriate opportunities for them in later life.

Learners and workers in each field benefit from the differences between them, where one field may better serve their needs and interests at different times in their lives. Yet, learners and workers in each field are also subject to problems created within each; problems that are not of their making. Many also fall victim to the walls put up around each field that impede them from transitioning seamlessly back and forth between the three fields in ways that may better serve them, or their life and career trajectories.

The Guest Editors of this NSI focus on the discontinuities that currently exist between education, training and decent work, arguing that existing discontinuities between these three fields create and reinforce exclusions and inequalities for already marginalised groups. They argue that treating the three fields as a continuum would improve the inclusion of people who continue to be excluded from the "standard" journey between education, training and work.

Michel Carton and Christine Hofmann have compiled 28 contributions from 25 countries from 5 continents to address these questions. Part 1 puts education–training–work continuums in historical perspective and Part 2 reviews continuum innovations in the 1980s and 1990s. Part 3 then focuses on remediation systems for "uneducated" youth and related un- or under-employment. Part 4 describes practices of improving the education–training–work continuums from a vocational perspective and the promise of education–training–work continuums as a way out of crisis is the focus of Part 5. Finally, Part 6 challenges current narratives about education, training and work to give a future-oriented perspective on continuum approach and practices.

NORRAG Special Issue was launched in 2018 with the ambition to be an open-source periodical giving prominence to authors from various countries and with diverse perspectives. In line with the NORRAG's strategy, and seeking to bridge the gap between theory and practice, each issue focuses on current debates that frame global education policy and international cooperation in education. The first NSI focused on the Right to Education Movements and Policies: Promises and Realities, the second edition on Data Collection and Evidence Building to Support Education in Emergencies (Spring 2019), the third edition focused on Global Monitoring of National Educational Development: Coercive or Constructive?, the fourth edition examined New Philanthropy and the Disruption of Global Education (Spring 2020). The fifth NSI addressed Domestic Financing: Tax and Education, while NSI 06 considered States of Emergency: Education in the Time of COVID-19, and the most recent, NSI 07 studied Education in Times of Climate Change.

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Contents

List of abbreviations

AERD	African Education Research Database
AfDB	African Development Bank
AFD	French Development Agency
AGEPE	Employment Studies and Job Promotion Agency
AJOL	African Journals Online
ALE	Adult Learning and Education
ALMP	Active Labour Market Program
AR	Augmented Reality
BIBB	German Institute for Vocational Training
C2D	Debt Reduction and Development Contract
CEO	Chief Executive Officer
COL	Commonwealth of Learning
COMTEAN	Computer and Telecommunication Engineers Association of Nigeria
DDR	Demobilization and Reintegration
E2E	Education to Employment
ECEC	Early Childhood Education and Care
EIT.swiss	Swiss Association of Electrical Installers
ETIC	Education–Training–Integration Continuum
EU	European Union
GI	Governance Infrastructure
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoH!	Generation of Hydrogen project
GSMA	Groupe Spécial Mobile Association
HRH	Human Resources for Health
IA	Informal Apprenticeship
IEA	International Association for the Evaluation of Educational Achievement
ILO	International Labour Organisation
IPU	Informal Production Units
ITP	Industry Transformation Programme
JICA	Japan International Cooperation Agency
KNFJKA	Kenya National Federation of Jua Kali Associations
KTTC	Kenya Technical Trainers College
LLL	Lifelong Learning
LMIC	Low- and Middle-Income Countries
LNOB	Leaving No One Behind
LTBC	Luanshya Technical Business College
MTT	Ministerial Task Team
NCVER	National Centre for Vocational Education Research
NDoH	National Department of Health
NEET	Neither in Education, Employment nor Training
NFE	Nonformal Education
NGO	Non-Governmental Organisation
NITA	National Industrial Training Authority
NQF	National Qualifications Framework
NRC	National Research Council
OIT	Organisation Internationale du Travail
OOF	National Training Office for Oil-Related Trades
PEJEDEC	Youth Employment and Skills Development Project
PENF	Program to Support Non-formal Education
PIRLS	Progress in International Reading Literacy Study
PPPs	Public-Private Partnerships
PwC	PricewaterhouseCoopers
R&D	Research and Development
RPL	Recognition of Prior Learning
SDGs	Sustainable Development Goals

SFUVET	Centre for the Development of Occupations of the Swiss Federal University for Vocational Education and Training
SIB	Social Impact Bond
SIG	Services Industriels de Genève
SKA	Skills, Knowledge, Abilities
SOP	Standard Operating Procedures
SSA	Sub-Saharan Africa
TAFE	Northern Metropolitan Institute of Technical and Further Education
TEI	Tertiary Education Institution
TETFUND	Tertiary Education Trust Fund
TEVETA	Technical Education, Vocational and Entrepreneurial Training Authority
THIMO	Initiative with High Workforce Requirements
TVET	Technical and Vocational Education and Training
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
UPSA	Union of Automobile Professionals
USAM	Union Suisse des Arts et Métiers (Swiss Union of Arts and Crafts)
VET	Vocational Technical Training
VR	Virtual Reality
VTT	Vocational Technical Training
WHO	World Health Organization
WT	Work Training
WTC	Work Training Centre
YCT	Yaba College of Technology

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Discontinuities between the fields of education, training and work create many problems for learners and workers of any age. These discontinuities emanate from an assumption that an individual should progress on a linear series of stages from basic education to professional training, and on to work – hopefully to decent work – and that each of these stages will take place in a dedicated sphere. These discontinuities have often negatively affected underprivileged people by exacerbating inequalities and exclusion. Taking a continuum perspective on education, training and work allows us to respond positively to inequalities and exclusions[1].

A continuum is "*a continuous sequence in which adjacent elements are not perceptibly different from each other, but the extremes are quite distinct*" (Oxford languages), that is, without discontinuities between the elements.

In this NORRAG Special Issue, therefore, we propose to explore the possibilities of challenging and undermining these discontinuities between education, training and work by implementing different contextualized types of continuums. This is an open-ended perspective, where discontinuities are considered as contextualized phenomena observed by continuum stakeholders through various lenses. Addressing the range of disruptive discontinuities across the three fields should be more productive than remaining in silos, both for stakeholders and the youth/adults they purport to serve.

This would lead to different scenarios – taking theory, policy and action-oriented lenses – as a basis for compromise-based creative proposals and actions. Those currently excluded from either education, training or work could then "travel" between any of the three components of a continuum at any time and in any order. The prerequisite for that "journey" – and its recognition – is that multiple entry points, transitions and bridges exist between the fields of education and training and decent work. If this condition is fulfilled, a continuum is the way to facilitate the re-entry of excluded youth and adults as meaningful contributors to their socio-economic environment.

The blending of education, training and work or parts thereof into subsystem fields underlines the permeability and fluidity that characterize any continuum. Nevertheless, this flexibility has some logical limits as the three fields have their own specificities and are not fully overlapping. Hence the importance of contextualized governance arrangements, especially so that education, training and work can overcome the negative disruptive impacts of discontinuities on underprivileged youths and adults.

There are important complementarities between a continuum perspective and the concept of lifelong learning: the first deals with the institutional and organizational dimensions of learning, and the second with the individual ones. In other words, lifelong learning is anchored in a demand-driven approach from individuals and different types of organizations, including enterprises. A continuum approach (considered as a system) operates from more of an institutional supply-driven perspective – even though the two paths are compatible.

The ongoing reflections on the futures of education and work (by recent UNESCO and ILO reports and in Sustainable Development Goals (SDGs) 4 and 8) open the debate on the consequences of discontinuities between education, training and work. The UNESCO Future of Education report "Reimagining our future together: a new social contract for education" (2021) proposes that "*teaching needs move from being considered an individual practice to becoming further professionalized as a collaborative endeavor*", and that we should *"move from thinking of education as mostly occurring in schools and at certain ages, and instead welcome and expand educational opportunities everywhere for everyone"*. The ILO Future of Work report "Work for a brighter future" (2019) argues in a similar vein and develops the concept of "*future of work transitions*" throughout life, encompassing lifelong learning and seamless pathways between the three fields of education, training and work – under the purview of "*investing in people's capabilities*". The institutional dimension is captured by calling on *"investments in the institutions of work"* – which a continuum perspective would expand into the "*institutions of education*".

This NORRAG Special Issue attempts to curate the diversity of perspectives and instruments that are needed to unpack the challenges that have emerged about the interactions between education, training and work in past decades, and to bring new lenses, imaginaries and insights to them. It aims to provide a strong and critical analysis that can point out the way forward. The twenty-eight contributions are organized around six interlinked and complementary themes and are based on conceptual and strategic reflections as well as case examples.

Part 1: A historical perspective: from upgrading "traditional" apprenticeship and community training towards e-learning

The first theme explores the persistence and potential of traditional learning systems that ensured inter-generational knowledge and skills transmission over centuries. Education, training and work are situated within a non-linear and ad hoc process whereby the workplace (for apprenticeship) and the household and community (for community training) are the main learning spaces. This can help make them powerful instruments today to help overcome discontinuities between education, training and work. Akoojee and Werquin in their contribution argue that apprenticeships in the informal economy – because they take place on a continuum – are important tools for labour market integration of young people. They call for a paradigm shift and their full inclusion into national education and training landscapes. In their articles Dia and Davodoun both provide an anthropological perspective on apprenticeship systems and how they evolved over time. In discussing developments in Senegal to recognize and modernize apprenticeships in the informal economy with an aim to overcome the divides created between formal and non-formal apprenticeship systems, Dia commends the paradigm shift undertaken, yet points to critical persisting challenges, complexities and new paradoxes. Davodoun considers digital technologies as key enablers to both improve access to apprenticeships and to boost the quality of learning. The potential that Davodoun sees is practically applied in a pilot project of the Commonwealth of Learning in Kenya, Nigeria and Zambia, described by Neal et al. Castellsagué describes how gender roles in Nepal either confine women to drop out of formal learning pathways or alienate them from their communities and roots – rather than redefining and broadening the concept of a continuum and ultimately improving the situation. Niada adds another dimension to traditional education, training and work situations: the intergenerational continuum. His article challenges one-directional learning in traditional learning systems and provides examples in Mali and arguments for the integration and utilization of multiple perspectives from different generations to enrich learning.

Part 2: Innovations and experiments in recent decades

The 1980's were marked by a focus on the different ways to facilitate transitions, mostly between education and training, since the reciprocal ignorance/disdain between education and business prevented constructive interactions. King puts this period in the perspective of 100 years of Vocational Education and Training (VET) discourses, reviewing the spectrum of visions and realities concerning VET. From industrial education for African-Americans in the US and then adapted by development agencies for Africa as VET for the informal economy and entrepreneurship enshrined by SDGs 4 and 8, VET's position mid-way between education and work has always induced dependent, minimalist or conflictual interactions between these two worlds. Contemporary innovations tackling discontinuities must be looked at through these historical lenses. Manogaran analyses one of the main innovations of the 1990's that aims at opening the education, training and work silos through dialogue and cooperation between their stakeholders. Activity theory allows the exploration of the social dimensions of National Qualification Frameworks by emphasizing the importance of these dimensions in the governance of any continuum. Governance issues are also at the heart of Van Der Meer and Taurelli's contribution on the hybridization of governance and innovation in education, training and work continuums where public-private partnerships (PPPs) appear in response to skill mismatches. In countries with institutionalised social dialogue, a broadening in the hybrid governance of apprenticeships and a continuum occurs. In countries with less institutionalised social dialogue, new PPPs represent innovation both in institutional and pedagogical terms. According to Jacinto, a governance issue was also determinant in Argentina

concerning youth integration since, before 2000's, VET was modelled within the education system along the same lines as work and employment. A change of configuration occurred with new interactions of short VET courses with technical and vocational training, secondary and tertiary education. These changes created both space for collaboration and tension within and between the stakeholders, among which trade unions played a significant role.

Part 3: Youth not in education, employment, or training (NEET) : building interactions between target populations and remediation systems

In parallel to the growing interest in apprenticeship, most reflections and actions around the notion of education, training and employment concern harmful discontinuities in all parts of the world. Part 3 focuses on young people and spans perspectives from Peru, across sub-Saharan and Northern Africa to Australia. Kouakou and Yeo discuss whether growing numbers of youth not in education, employment and training (NEETs) can be attributed to poor quality educational systems – an argument also taken up by Toumi later – and why active labour market programs (ALMPs) have not helped to build sufficient bridges. Balarin and Jamarillo explain the complex difficulties youth from underprivileged households and neighbourhoods face in Peru in their transitions from low quality education, scarce training opportunities and too often to informal or precarious jobs, or to becoming NEETs. Their article analyses and proposes how this vicious cycle can be broken by overlapping and multipronged interventions, including with a dedicated gender focus. Smith's contribution unearths underexploited potential for a continuum in Australia and shows that linear perspectives of school-to-work transitions are flawed. She shares ideas such as how better recognition of work experience in education trajectories, career advice, lessons on labour rights in general education, and stronger dialogue between employers and educational and training providers could strengthen continuums. Toumi's text focuses on how second chance schools help prevent school dropouts from becoming NEETs in Tunisia. Despite being a well-known model internationally, second chance schools have been newly established in Tunisia, with a number of promising innovations.

Part 4: Building capacity, implementing and meeting challenges

The previous parts presented a panel of ways to approach, study and analyze the discontinuities between education, training and work in order to ground evidence-based decisions and actions. This part gives the floor to stakeholders who have translated their knowledge about continuums in concrete actions. Chardonnens demonstrates how in Switzerland political and administrative constraints impede the necessary regular updating of the training framework and instruments. Hence mismatches develop between market demand for skills and the skills available. The case of a project covering the entire value chain of hydrogen is presented to demonstrate that changes in training policies and practices need to be a co-creation between all concerned stakeholders. This systemic perspective allows anticipation, the reverse of what stems from an approach focused solely on one of the three spheres. The contribution by Rispel and Buch illustrates an opposite approach to the Swiss one from South Africa. Starting from an overall national vision and specific goals for Human Resources for Health (HRH) supported by an extensive consultative and participatory approach, a lack of capable HRH leadership, the under-development of institutionalized capacity to envision a continuum perspective as well of advocacy have prevented its implementation. Even though the strategy aimed at breaking the internal HRH silos and the discontinuities stemming from this segmentation, its implementation failed. Carr presents the Recognition of Prior Learning (RPL) as a model to strengthen continuums in the Australian Early Childhood Education sphere. RPL is often discussed as one of the possible solutions to bridge discontinuities, and the case from Australia shows what success factors and system enablers are required for RPL to lead to benefits for individuals, employers and training centers alike. An article from an inter-academic and inter-institutional group shows a lack of or limited provision of career services in Tertiary Education Institutions (TEIs) in sub-Saharan Africa. The article sheds light on how career services can increase tertiary students' chances of improving their employability/gaining employment. It demonstrates that taking a broader perspective to career services - including providing guidance and counselling; integrating skills development opportunities through curriculum and pedagogical changes; collaboration between TEIs and employers, as well as graduates/alumni - can enhance students' employability.

Part 5: Continuums as a transitional way out of crisis

Part 5 deals with the multiplication of global crises and looks at the impact of crises such as climate change, armed conflict, migration and informality on education-training-work discontinuities. The general assumption is that crises aggravate situations, disrupt learning and career pathways, and hit people already in vulnerable situations much harder. Unwin, Harindranath and Lorini look at the pros and cons - the Janus duality - of digital tech for migrants in times of crisis, and what is required to better use the potential of digital technology for stronger education, training, work continuums, e.g. by making learning more accessible, securing qualifications, or facilitating remote work – yet only when and if people possess basic digital skills and have access to devices and connectivity. Ryan presents ecological education – triggered by ecological crises – as way out of mainstream approaches to education, arguing that

mainstream approaches to education uphold a status quo rather than innovate through autocriticism. What is needed is an approach that values diversity, acknowledges inequalities, democratizes knowledge creation and makes learners agents of their own pathways. Good intentions, such as aid interventions in response to political crises and war, might not necessarily translate into positive impact, as highlighted by Harris. Poor design, lack of proper contextualization, limited involvement of stakeholders and weak monitoring and evaluation systems all contributed to increasing education, training and work discontinuities rather than strengthening continuums for post-war recovery. Soudien talks about both the youth unemployment and informality crisis, and joins Ryan in a call for acknowledging agency and innovations that are taking place, extending analysis in particular to informal contexts, as a means to overcome education, training and work divides between social and economic spheres, formal and informal arrangements, and to strengthen continuums so badly needed by young people in low income countries.

Part 6: Challenging current narratives and perspectives

If crises are supposed to lead to transition pathways, transformative options in education, training and work such as resistance to the primacy of the school and technology, relevant governance structure, and inclusive urban lifelong learning policies based on a continuum could shape the future. In that perspective, Douse's and Uys's defence of discontinuities is clear: life is much more than work, and education is much more than training. Discontinuities between education and work are vital to preserving the former's integrity. The colonization of the school room by the workplace must be stubbornly resisted. In contrast to the previous position, Chakroun and Keevy look at how the fast-paced and fluid evolution of skills recognition and validation modalities has the potential to harmonize education, training and work continuums in a lifelong learning perspective. This can happen through an evolving credentialing ecosystem characterized by the coexistence of formal, micro and digital credentials. The governance infrastructure of continuums is a key element for its success as described in Saner and Yu's article. An educational governance system based only on input or output measures is neither satisfactory nor effective. The necessary institutional arrangements include a national information system, and social performance is the second rationale in setting up a robust four level – micro, meso, macro and meta – governance infrastructure connecting the dots. This would allow a continuum to operate as the "new normal". The same concern is developed by Sung regarding Singapore's Skills Future Policy which designs skills provision linked to the demand for skills, allowing the linkage between provision and job transitions. Lifelong learning is the main delivery vehicle, integrating the different components of education, work, skills, learning, self-development, industrial and social development. Coping with inequalities stemming from discontinuities can also be achieved via ad hoc strategies. Pieck describes four strategies that have the potential to raise the quality of Work Training Centres (WTC): collaboration with the public sector and high school institutions, higher quality of the non-formal education programmes, strengthening of institutional links with financial institutions, business development services and government's agencies, provision of education, career and employment services for NEETs. These strategies do not require large resource mobilization. The article by Arulmani echoes the first article of this Part. Over the recent past, career and livelihood have been increasingly discussed in juxtaposition. How could bidirectional collaborations between career development and livelihood thinking contribute to better wellbeing? These collaborations could help create education-training-work environments focused on welfare, comfort and security, contributing ultimately to states of equilibrium that are consonant with workers' wellbeing.

The 28 contributions to this NORRAG Special Issue illustrate what a continuum perspective can achieve: help policy-makers, practitioners and academics alike identify and address barriers to inclusion of vulnerable groups and individuals, and successively shape education, training and work systems in a way that transition pathways are open and accessible in all directions. A stronger integration of education, training and work systems, and of approaches that reinforce continuums, have therefore an important role to play in the global quest for more equal, inclusive and sustainable societies.

Endnotes

1. Referred to in the texts as the continuum or continuums.

Part 1

Education–Training–Work Continuums in Historical Perspective: From Upgrading "Traditional" Apprenticeship and Community Training towards E-Learning

Informal Apprenticeships for an Emerging Economy

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Summary
As a much-touted and practised element of the overall work-based learning system in Africa, informal apprenticeship (IAs) is an important element of the overall education and training system in much of Africa, as in most emerging economies. It is, however, still relegated to the periphery, and it exists as a distinct and parallel system to the formal vocational preparation of youth. While interventions are necessary, the response should not undermine its key premises, promises and potential.

Keywords
Informal Apprenticeship
Access
Inclusion
Upgrading
Work-based Learning

Introduction

Informal is an adjective that applies to several concepts, such as learning, employment, economy and apprenticeship. This contribution focuses on the latter – informal apprenticeships (IAs) – defined as the vocational preparation of young people for the labour market in the informal economy. While there is abundant literature on the informal economy on the one hand, and on apprenticeship on the other, there is less on apprenticeship in the informal economy. Those that exist have been mainly published by international organisations (Akoojee, 2019; Axmann & Hofmann, 2016; International Labour Organization [ILO], 2012; Lange et al., 2020; Werquin, 2021).

Given the presence of large informal economies in developing and emerging economies, the IA is probably the dominant form of vocational preparation for the labour market in many of these countries. The distinction between informal and formal apprenticeship does not have currency in countries where most of the apprenticeship is informal, and even learners rarely define themselves (or think of themselves) as informal apprentices. Nevertheless, the distinction is meaningful for actors and other key stakeholders in the education, training and qualifications system and their role in the national system of skills and competence development. The extent to which it actually prepares young people to reasonably access opportunities and perform appropriately in the labour market represents a crucial element of its value. In the same way that informal and formal economies are complementary to providing jobs and competences to young people, formal and informal apprenticeships represent an intrinsic feature of the education–training–work continuum (hereafter the Continuum).

Understanding Strengths and Shortcomings

The ambition to improve the IA system should not detract from the system's essential strengths, which, if tampered with, will likely undermine its sustainability. The most important element relates to the notion of the ownership of the system. Most IA systems have evolved organically. They are traditional

systems that have emerged from a felt need by communities to respond to the need to induct youth into the economy. More recently, this essential youth development purpose has been underpinned by a strong desire to ensure that those who were unlikely to be absorbed into the (formal) system would be meaningfully engaged. Indeed, the largest contributor to the IA system is the inability, incapacity or indifference of the formal training system to cater to excluded communities[1].

Further, the graduates who enter and emerge from this system have a defined vocational pathway. Understandably, while a possible assumption is that it is not a "chosen pathway", the fact that it does provide a livelihood option not available elsewhere is clearly a strength of this system that perhaps needs to be recognised and acknowledged. The competences provided to learners in this system are designed to replicate in all its facets the micro and small enterprises in which training takes place. The (informal) learning plan provided to learners in this system reveals a "tacit" curriculum, which while not codified, inducts trainees into the multi-faceted nature of the enterprise, providing the necessary knowledge, skills and attitudes appropriate to function effectively. Clearly, an informal apprenticeship system, because it is not reliant on government funding, has been touted as a strength by governments intent on a more cost-effective mechanism for competence development. Should investment not be forthcoming to upgrade it, however, it is also likely that its potential value will be undermined.

Some identified shortcomings of IAs include, *inter alia*, lack of attention to equity in recruitment (gender, social stigma and disability) (Hofmann et al., 2022); some decent work deficits (ILO, 2012; Nübler et al. 2009), including inadequate attention to occupational safety and health measures; challenging working conditions and absence of insurance (and social protection); low technical and teaching/training skills of master craftspersons, trainers and small business owners/mentors); and lower apprentice expectations with respect to specific time-based learning of competences and level of qualification[2]. There are clearly issues that need to be addressed that might require concerted attention to organisation and structure. While formalisation and regulation have been considered an overall feature of the "upgrading" of IA (ILO, 2012), we argue that it is likely that regulation will undermine the key strength of informal apprenticeship by, for instance, increasing transaction costs and aggravating the administrative burden for employers who would rather no longer hire informal apprentices.

The possibility that the system can and tends to be exploited by unscrupulous employers/mentors means that some concerted intervention is necessary, notwithstanding that some of these employers are in situations that are barely sustainable. Given the vulnerability of those who participate in the IA, this means that the lack of national attention to the sector needs to be addressed.

Innovative Policy Initiatives

Intervention in IA must recognise its strengths while responding to and addressing its current weaknesses. IA as a distinct and unique education and training "system" with distinctive characteristics will require a paradigm shift. To improve outreach, inclusiveness and relevance of the competence development system, the motivation for "upgrading" should be directed at developing a national strategy. Upgrading initiatives have to increase decent employment opportunities of those in the system by also proposing inclusion into the formal economy – while providing the necessary government support to improve existing learning opportunities. This learning form will not only be more cost-effective (as compared with the formal system) but will also enhance inclusion for those with limited opportunities. Government support is therefore essential. The following measures are proposed:

- Recognition of IA as a system that delivers relevant competences for the labour market.
- Improving information systems to better capture data on IA and enhance its dissemination.
- Financial support to incentivise the system at all levels, namely, supporting master craftspersons and apprentices to further invest in their skilling and upskilling; subsidising learning activities to upgrade competences; investing in competence standard setting, monitoring and evaluation; organising end-of-apprenticeship assessments (and ceremony); and learning outcomes and competence assessments.
- Recognition and legitimation of competences acquired in IA systems and enabling pathways and linkages between formal and informal TVET systems.

The role of small business and trade associations as essential intermediaries in the IA system will play an instructive role in assisting the design and implementation of skills programmes. Social development partners represent a primary feature of upgrading initiatives to advance the system. Initiatives could include, inter alia, active participation in setting competence standards, developing apprenticeship agreements, monitoring at the local level, supporting and respecting fundamental principles and rights at work and providing a voice for both master craftspersons and apprentices through local and national organisations. Such activities are key for their role in creating awareness of existing strengths and weaknesses and their ability to support existing business or craft associations,

apprentices or parent associations. The recommendations for development partners include advocating for advancing informal apprenticeship as a viable and indispensable system, supporting organisational development of informal business or crafts associations and collecting more and more comparative evidence about their effective functioning[3].

Improving and legitimising informal apprenticeship through a range of mechanisms, both organisational (e.g. accreditation of tutors or employers, competences for apprentices with business association intermediaries) and informal (establishing informal sector entities) mechanisms, will generally improve the system. The fact that this training offer needs to be available and affordable, ideally in collaboration with business or crafts associations, is crucial to its sustainability. In this regard, the role of master craftspersons is key. While they could benefit from (and require) pedagogical competences and awareness of occupational safety and health, evidence suggests that they have clear preferences for up-to-date vocational or technical competences and access to modern technology from which they will directly benefit. The continued support of and access to costly machinery, which they are unlikely to afford on their own, will go a long way towards securing their continued support and commitment.

Conclusion

All African countries have clearly identified that the informal economy is a large – if not the largest – provider of employment competences for young people. IA will serve as a key element in driving the education, training and work framework. We contend that IA systems will serve as a better tool for integration into the labour market and for improving the consistency of the continuum, which serves as a valuable conceptual tool for its legitimation and its ability to advance national development.

We argue that a paradigm shift is necessary in efforts to incorporate IAs within the current system. Carefully crafted solutions need to ensure that key challenges are considered while advancing legislative inclusion. This requires taking into account the contextual features that move away from a one-size-fits-all approach. The key is to enable the informal apprenticeship to be considered a separate and fundamental element (system) of the national education and training landscape. Engaging the various (local) role players to come together to advance its key strengths, with national support should be prioritised.

Endnotes

1. In Malawi, for instance, at least 90% of the population has their main activity in the informal economy (Aggarwal & Aggarwal, 2021). Most of the youth acquire skills through IA as the formal training system has very limited capacity. Disadvantaged Malawian youths, due to various financial and non-financial barriers, including unaffordable fees, illiteracy, physical disability and stereotyping, are attracted to informal opportunities simply because they are unable to access formal technical and vocational education and training (TVET).
2. The latest information suggests that this is not consistent in all countries; for instance, Hofmann et al. (2022, p.15-16) found that in some contexts, the level of education is quite reasonable and that informal apprentices are young people with a certain level of education, which in some cases even exceeds the respective national education average.
3. In the case of Ghana, for instance, they have played an important role as a watchdog and taken on conflict resolution responsibility to resolve differences, in association with social partners (in this case the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH [GIZ] (see www.ghanaskills.org).

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The Modernised Apprenticeship Model in Senegal: Development of a New Paradigm

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Summary

Technical and vocational training which is organised around the principle of non-formal learning is becoming increasingly relevant and legitimate. This article seeks to critically explore Senegal's experience with modernising apprenticeship. It will briefly present the model before considering its strategic and operational challenges.

Keywords

Apprenticeship
Informal
Formal
Training
System

Points of Reference and Preliminary Considerations

In Senegal and greater Western Africa, including Mali, Benin, Niger and Togo, a longstanding tradition of production and transmission of skills through an apprenticeship system has developed. Apprenticeship is the "term traditionally used to describe the process by which the transmission of technical and vocational expertise from an apprenticeship master craftsperson to an apprentice is organised" (Chort et al., 2014). This transmission is built on various educational methods that are difficult to formalise and have no intentional objectives. The apprentice, in a non-linear manner, observes, imitates and reproduces the skills of the master craftsperson.

Recent literature has focused on the key importance of traditional apprenticeship in workforce learning dynamics within a "hypertrophied informal economy" (Werquin, 2021), although existing research on the subject is limited and fragmented. A study on the informal sector in Senegal revealed that there were 281,600 informal production units (IPUs) in the Dakar area, with 234,200 people in the non-agricultural market sectors (Direction de la Prévision et de la Statistique, 2005). According to the same source, apprentices in training formed 62.6% of the IPU workforce. The General Census of Enterprises (ANSD, 2016) shows that according to the national definition 97 per cent of the country's non-agricultural economic units are in the informal sector. (ILO, 2020b)

The potential to enrol youths in the traditional apprenticeship system is disproportionate to the educational offer in the formal system. According to recent data from the Statistical Yearbook 2020 of the Employment, Vocational Training, Apprenticeship and Inclusion Studies and Planning Unit, there are only 85,000 learners in public and private vocational and technical training (VTT) institutions. On the other hand, the traditional apprenticeship system attracts nearly 400,000 apprentices in over 120 occupations.

Senegal aspires to develop and consolidate a relevant skill development system that takes into account the needs

of training curricula content, system management and governance. This internally and externally efficient system should be able to support a training–working continuum and ensure shorter transitions from school to working life.

Vocational training, in a non-formal situation, covers much of the spectrum of skills required for the practice of trades. Built on more inclusive logic and immanent processes of social legitimation, it represents a credible alternative for young people excluded from the formal system.

However, those who support this consensus do not fully grasp the complexity of the subject. Approaches to categorising and classifying trades – that risk being formalised and sophisticated – have resulted in fiercely opposing the formal and the non-formal. In our opinion, the education and training system should be considered in its entirety, with the view of integrating both subsystems, creating a permeability effect whereby students in training and workplace integration can switch from one to the other.

From Marginalisation to Integration: Premises of a Paradigm Shift

For many years, the traditional apprenticeship model developed outside of formal training schemes, which were widely inspired by the French model. Its official recognition and legitimisation only occurred after a long process of experimentation and capitalisation. This transition from marginalisation to integration has been driven by internal dynamics specific to Senegal's socio-political context. However, it is also related to the changing international context, which has seen major disruptions in skills development policies (Gaye, 2020).

While it is not necessary to trace the entire historical and cultural evolution of apprenticeship systems in Senegal, it should be noted that the 2001 "Assises Nationales" [National Conference] on vocational training represented a decisive turning point in the apprenticeship institutional legitimacy process and its integration into the global vocational training system.

The Assises laid the groundwork for the in-depth reform of the vocational training system and redirected the underlying national policy. The resulting shift of traditional apprenticeship, from marginalisation to integration, was reinforced as a result of a favourable regulatory, legislative and political framework. Without going into exhaustive detail and bearing in mind that this theme has been widely addressed in a study on the external efficiency of vocational training (Diompi et al., 2011), it is important to identify certain key events which contributed to establishing modernised apprenticeship on a normative framework.

We might mention here the General Policy Statement on Education and Training (2012–2025), which followed on from the conclusion of the Assises, and which confirmed the extension of the scope of Technical and Vocational Education and Training (TVET) to include apprenticeship, as well as the 2014 General Principles Act on vocational and technical training, which introduced certification via the recognition of prior learning (RPL).

These reforms allowed for the apprenticeship process to be integrated within the wider system. However, their formulation was quite generic by its very nature. The practical implications of the 2014 Act, for instance, have not yet been defined in order to develop and extend the organisational and operational rules of apprenticeship in its established form.

The Modernised Apprenticeship Model: A Sustainable but Complex System

Following a series of trials starting in 2005, Senegal established a Modernised Apprenticeship Model. Its development since then has produced significant, sustainable and scalable benefits in terms of youth employability.

The country opted for a training model "where the master craftsperson's workshop is where all training takes place" (Diakité, 2021), whereas countries like Benin, Mali and Togo moved to a dual apprenticeship model. In the Senegalese model, structures of vocational and public training only become involved in the process as resource centres intended to offer subsidiary training to apprentices.

The modernisation of apprenticeship forms part of a wider process of standardising traditional practices of skill development and labour market integration. It seeks to respect the logic behind traditional apprenticeship, while implementing structured and formal learning methods that focus explicitly on educational objectives, certification and supporting transitions to work. The aim is to develop a structured and standardised training programme suited to the apprentice.

In a bid to reflect the coherent homogeneity of Senegal's wider vocational training system, modernised apprenticeship adopts a methodological approach similar to the educational and didactic standards of the formal system. The model incorporates a vocational training component that combines both training and business logics with facilitated entry into the labour market. The apprenticeship thus forms part of a training–working continuum that is less random than conventional schemes and which avoids the shortcomings of the formal system, which are characterised to some extent by "the disjunction between the specific training space and the work activity space" (Verdier & Vultur, 2006).

Over the years, the modernised apprenticeship model has gained greater institutional legitimacy, efficiency and operational viability. This represents a real paradigm shift in the training system. However, its implementation process creates strategic and operational challenges, which make the system relatively complex.

The first challenge, which stems from the very nature of the model, relates to the intrinsic duality between the logics of production and training in a non-formal context. The investments allocated to master craftspersons in order to modernise apprenticeship, whether pedagogical support, workshop equipment, guides or other teaching materials, are not in themselves sufficient guarantees of quality education. These investments' impact on the skill acquisition process and apprentice experience cannot always be established. A related challenge could be referred to as the consubstantial paradox of apprenticeship, linked to the dual requirements of attaining academic norms while remaining rooted in an underlying cultural and historical socio-economic logic. As a result of this constitutive paradox, the model represents both a new paradigm in the making and an ongoing process of modernisation, with a dedicated but incomplete and problematic integration.

The second challenge, which refers to the complexity of the model, relates to mastering the apprenticeship training process in a workshop in order to form a sound technical opinion on the skill acquisition process. Paradoxically, in our view, the apprentice, who is the main target and raison D'être of the apprenticeship, is given less attention than the master craftsperson. This structural constraint is exacerbated by the apprentice's precarious status.

Senegal has opted for a single model of certification that places the apprentice in a similarly competitive situation to learners in the conventional system. Similar to the conventional system, obtaining a CAP is considered "a level of qualification showcasing mastery in the practice of a trade" (Diakité, 2021). However, unlike in the conventional system and in practice, the apprentice appears restricted to the CAP, with neither a genuine nor perceived opportunity to join a programme of vocational qualification at a higher level, which would serve better in terms of decent and productive employment creation (ILO, 2020a).

The third challenge, and not the least, relates to how apprenticeship is funded. Despite a strong and stated political will, recorded in framework documents that commit to integrating apprenticeship, the system remains underfunded, representing less than 5% of the overall budget of the Ministry in charge of vocational training. As a result, apprenticeship is largely financed by external resources, which creates a variety of risks due to the random nature of the partners involved.

Conclusion

Integrating apprenticeship into the wider technical and vocational training system has been effective and has produced greater internal and external efficiency. However, the system remains quite complex, with structural and operational challenges related to its complexity, the duality of its implementation process, the persistent dichotomy between a production logic and a training logic, and funding.

Endnotes

1. Translator's note: The CAP is a level 3 vocational qualification designed to access a specific trade. It is the equivalent of the Youth Training National Vocational Qualification (NVQ) in the UK.

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Digital Services Transform Learning in Africa

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Summary
In Africa, apprenticeships exist in different forms, and access to each can be characterised as either very closed, open or filtering. Literacy was thought to improve access, but has not borne the promised fruit without the assistance of digital services. The explosive growth of mobile phones opens up perspectives on non-discriminatory access to dual-mode apprenticeships.

Keywords
Accessibility
Africa
Apprenticeship
Digitalisation
Revolution

The Issue of Access to Apprenticeships

Initial training through apprenticeships is a system that has existed for hundreds of years and has been evolving over time and in accordance with the current era. One characteristic of this evolution is gradually increasing accessibility. From the original traditional apprenticeship to dual-mode, which combines time spent in companies and at vocational schools, each form of apprenticeship is characterised by its conditions of access. Apprenticeship became more accessible when it moved beyond the restrictions of the family circle, before the dual mode introduced a new access filter. If the transformation brought about by the dual mode has unanimous support, it is also clear that the access filter is a cause of dissatisfaction. The population of potential young apprenticeship candidates is constantly growing. This very current issue sits at the core of governments' as well as parents' concerns, who see these young people drawn to the extremist groups that are proliferating on the continent. Therefore, it is urgent to find the pathways and resources required to train this mass of young people in the interest of peace and for the development of countries.

Original Traditional Apprenticeships

Traditional apprenticeships have been a long-standing feature of society. Originally, each family or group of families had a specific role to play in their community's cohesion and functioning. The community was organised in accordance with the principle that everyone was allocated a set area where their skills were useful.

Within the family, various types of knowledge were passed down from generation to generation. Traditional apprenticeships in their original form developed along gender lines. Families and groups of families formed into castes, turning apprenticeships into closed systems. Accessing a trade apprenticeship was not a question of wanting to do so; it was a matter of family connections.

Traditional Apprenticeships Relocated

Traditional apprenticeship in its original form moved away from the family context as new markets were sought and

large cities developed. Originally, the craft sector aimed to produce and provide services locally. As the local market became saturated, human instinct was first to develop itinerant trade activities and then to match supply with demand, which caused craftsmen to leave the family base in order to operate in other localities. Far from their villages and their relatives, craftsmen had to recruit young people from the friendship circle they had built as part of necessary social interactions. With this development, apprenticeships took a big step forward, from the family circle to the friendship circle. This development opened access more widely.

Apprenticeships in the Colonial Era

Colonial history led to a new form of apprenticeships in order to process raw materials, develop new territories and open new markets by importing manufactured goods. Factories were set up to process raw materials into semi-finished products. A specialised workforce was required to operate and maintain the technical equipment needed and for the actual production. These processing units recruited young people for a given position and trained them on the job within the business. Colonies were supplied with consumer goods, and new skills were required to maintain and repair them. The recruitment met a genuine business need. Upon completion of the training, the apprentice was hired as a skilled worker by the business in which he trained. This represented a customised job opening.

Dual-Mode Apprenticeships

Initiatives to improve traditional forms of apprenticeship have resulted in dual-mode training. This training includes the introduction of theoretical courses in training centres to inform practice, the use of theoretical and practical training materials, the standardisation of the training duration, certification etc. Access to dual apprenticeships has now led to new requirements. The applicant must be able to read, write and calculate in the official working language, i.e. French, English or Portuguese. These conditions create a filter for access to apprenticeship and, for many young people (especially those who did not go to school, left school early or attended school but have been away from a learning environment for many years), prevent access to the vocational skills they need to integrate and find decent work. However, using literacy as a way to give young people greater opportunities has produced mixed results.

Introduction of Digital Services in Apprenticeships

The Meteoric Rise of Mobile Technologies in Africa

The development of mobile technologies is a modern phenomenon that has left no industry untouched. Their expansion across all regions of the world is remarkable. Currently, according to Wear Social (2019), more than 5.1 billion people use a mobile phone, the majority of which are smartphones. According to the same study, total mobile phone subscriptions numbered 8.9 billion in October 2018, and this market represents more than half of the global web traffic at 51.6%.

The African continent is no exception. Africa has the highest mobile usage rate, covering almost 80% of the population, and had a market growth rate of over 4% from 2017 to 2018. In sub-Saharan Africa, 1.04 billion SIM cards will be in use by 2025 (Groupe Spécial Mobile Association, 2019). The mobile device penetration rate in French-speaking Africa sits at 100% for a population estimated at 410 million in 2017. According to an emerging trend, nearly 300 million new subscribers will gain access to mobile internet in Africa in the next seven years. Consequently, Africa is entering an era where every person will have a mobile phone.

The remarkable penetration of mobile phones in Africa presents a great opportunity for the development of dual apprenticeships. The use of digital media in apprenticeships would help do away with access filters. Once these obstacles were removed, all those who were previously locked out of apprenticeships would be able to access them. The use of digital services in apprenticeships bodes well for the future.

Potential Impacts of Digital Services on Dual Apprenticeships

With digital technology, school attendance as a condition of access could be removed, training materials could be designed on equipment accessible to all candidates, economies of scale could be achieved in reducing the funding required to develop training modules etc.

- School attendance, which is a prerequisite for dual-mode apprenticeship, would no longer be required. Reading, writing and calculating in the official working language would no longer be necessary. Literacy would no longer be a prerequisite for dual-mode apprenticeships. However, digital services would help promote literacy to assist apprentices. Pearce (2009) rightly argued that in today's information society, literacy is essential to access the opportunities provided by the digital world. For example, apprentices would be able to use training materials in their own language, thanks to digital services. Mobile technologies would enable unimpeded communication to explain, demonstrate, illustrate, describe, comment and analyse in all learning situations.

- The use of digital services would give much broader access to dual-mode apprenticeship. People who attended school, did not attend school, dropped out, are literate or not etc., would therefore be able to overcome the barriers to access. Apprenticeships would also be open to young people with no vocational qualifications and to those on social welfare. With this tool, a large-scale

training policy could be devised to meet young people's needs for vocational qualifications.

- Digital services would provide wide access to training modules wherever needed. It would be an excellent system for broad distribution of training content. Digital modules are easily accessible to both the instructor and the apprentice. The latter may even be able to access content in a work situation after the apprenticeship. Digital tools would very possibly help with self-training and DIY skills in the home. Moreover, the creation of these digital materials would not require expensive investment. All that is needed is basic video-making equipment with the ability to overlay several voices in different languages. The use of digital services would be compatible with practical and theoretical courses. The digital revolution is, first of all, a promising way of refreshing training methods and, even more, a means of adapting educational pathways to the expectations of individuals and businesses (Amar & Burstin, 2017; International Labour Organization, 2022).

- The use of digital services would drastically reduce the costs of producing training materials, particularly with regard to publishing, distribution and dissemination costs. In addition, the same training materials could be available in several languages, thus eliminating production costs for each language. Mobile technologies bring efficiency and effectiveness to module production, thus generating economies of scale.

- Training materials in digital form would strengthen learning methods such as observing practical training sequences and illustrations of the theory, repetition of learning sequences, listening, mimicking, reproduction, duplication etc. They would facilitate the acquisition of both technical and managerial vocational skills.

All in all, mobile technologies herald an unexpected revolution in the development of apprenticeship in Africa. The use of digital services would allow all people, in this case, young people, to gain access to vocational skills through dual-mode apprenticeships in the language they are proficient in. Mobile technologies represent a key driver to train young people in Africa in large numbers.

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Blending Modern Technology and Traditional Apprenticeships to Scale Technical and Vocational Education and Training (TVET)

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Summary

The Commonwealth of Learning Skills in Demand model seeks to address high unemployment and low productivity in employment in Africa by fostering collaborative partnerships between informal industry and technical and vocational education and training (TVET) institutions for workplace plus online learning. This paper describes the model and progress to date in projects in Kenya, Nigeria and Zambia.

Keywords

TVET
Online Learning
Workplace Learning
Industry TVET Collaboration

Introduction

The Commonwealth of Learning (COL) Skills in Demand model seeks to help address two global challenges – high unemployment and low productivity in employment. Several factors reinforce present inequalities, i.e. low or no skills, skills mismatch, low-quality technical and vocational education and training (TVET), limited access to TVET and cultural stereotypes and discrimination.

The model's logic is as follows:

1. Formal qualifications in technical and vocational skills, selected because of potential demand, can provide access to labour markets that, in turn, lead to improved incomes and security.

2. Workplace plus distance and online learning can increase access to gaining such formal qualifications by increasing affordability and flexibility, at the same time ensuring relevance and giving learners the ability to achieve and demonstrate competence.

The model has three types of interventions:

1. Fostering collaborative partnerships between industry and educational institutions.

2. Lifelong learners acquiring credentials and skills through workplace plus online learning.

3. Influencing national skills and entrepreneurship systems through evidence-based advocacy and policy dialogue.

These activities align with COL's three pathways of change to achieve long-term outcomes at government, institution and individual levels (Neal & Kuppuswami, 2021).

Three Skills in Demand Projects

This paper describes the progress in three Skills in Demand projects in Kenya, Nigeria and Zambia, briefly described in Table 1.

Table 1. Brief descriptions of three Skills in Demand projects

Location	Education institution	Industry partner	Skill area
Lagos, Nigeria	Yaba College of Technology (YCT)	Computer and Telecommunication Engineers Association of Nigeria (COMTEAN)	Mobile phone, computer repair, business skills
Kitwe, Zambia	Luanshya Technical Business College (LTBC)	Nakadoli Furniture Cooperative	Carpentry, upholstery and business skills
Nairobi, Kenya	Kenya Technical Trainers College (KTTC) National Industrial Training Authority (NITA)	Kenya National Federation of Jua Kali Associations (KNFJKA)	TVET pedagogy, business skills

Foster Collaborative Partnerships between Industry and Educational Institutions

The first step for each project was to identify a skill gap that was in demand nationally. Once trained, learners would be able to find employment or become more productive in their existing employment. COL's project selection process included demonstrating evidence of demand for the skill to be developed.

COL's TVET partners found an industry partner who was committed to helping train for the skill in demand. Industry partners provided the physical environment for practical skill development alongside online theory. Master craftspersons played a crucial role in supporting, training and assessing learners, as they have for generations in informal apprenticeships. A key difference in this model is that they train towards a formal qualification with a TVET partner who can build master craftspersons' training skills, assure quality, and award a qualification aligned to a national qualification framework. Taking TVET to where apprentices are living and working, rather than requiring them to travel to a TVET campus, reduces costs for learners and increases choice of where and when they study.

Co-design Workplace plus Online Learning

COL's main role in the projects was capacity building. COL supplemented online learning[1] with regular virtual mentoring to build project teams' capability in learning design, digital open education resources development, competency-based assessment and supporting learners online and in workplaces. In this way, COL "walked the talk" by blending online with workplace learning, as the teams worked to implement a similar approach in their contexts.

Four lecturers from YCT and one master craftsperson from COMTEAN were also trained to be quality assurance assessors under Nigeria's National Skills Qualification Scheme. This was important in assuring government agencies that an innovative approach to skills development would maintain the quality necessary for awarding a national qualification.

Industry and academic partners worked together to design the learning experience and develop digital resources to ensure that the approach was industry relevant and academically sound. Both parties needed to be brought into the approach because they each had roles in supporting and assessing learning. The three projects collaborated in different ways.

A team of nine YCT academics and three COMTEAN master craftspersons worked together. To them, this collaboration was a major success of the project. Lecturers commented that they gained a better understanding of the up-to-date skills required in computer and mobile phone repair by working directly with industry experts.

LTBC academics had solid industry experience, taking the lead in learning design and materials development, while meeting regularly with their industry partner to check

appropriateness and build buy-in to the approach. LTBC facilitated training for Nakadoli master craftspersons to build their capability in training so that they could contribute effectively to the project. The academic staff also learned from the experience of master craftspersons.

KTTC academics developed learning resources with input from master craftspersons from the national federation artisans' associations. They also established an industry advisory committee with representatives from industry and government to provide guidance and ensure the relevance of the learning design and associated materials.

Lifelong Learners Acquire Skills and Credentials

The original vision was for the learning of theory and assessment to be done online. This increases options for learning activities beyond those of traditional printed resources and supports the collection of digital evidence to demonstrate competence. It also reduces costs because online resources are free to distribute, and some assessments of theory can be automated. However, this relies on learners having access to smartphones or other devices. While, during design workshops, industry attendees indicated this was feasible, in practice, it proved more challenging. Many informal sector master craftspersons and apprentices do not yet have reliable access to smartphones and internet connectivity, and data costs can be prohibitive. This challenge has been addressed in several ways.

YCT and LTBC printed out sections of the online materials to assist some learners in accessing the theory for their study. All YCT learners did automated multiple-choice quizzes online in addition to handwritten answers to open-ended questions with written feedback. Projects need to meet the entry requirements for the relevant national qualifications, which seek to achieve a balance, ensuring that learners can succeed while trying to reduce barriers to learning. Specifically, entry requirements are:

- Nigeria – engagement in apprenticeship relevant to the skill and a primary school certificate or ability to read and write.
- Zambia – open to those who have never been to school but are working in the skill area, may have primary school certificate.
- Kenya – Grade 3 NITA certificate (master craftspersons being trained).

COL has provided Aptus Pi to the projects. Aptus Pi is a low-cost device that enables learners to connect to digital learning platforms and materials without the need for grid electricity or internet access. Batteries can be recharged via grid electricity or a solar charger. Learners access the learning platform and materials using a laptop, tablet or smartphone. LTBC has provided two desktop computers at Nakadoli's workplace, by which learners can access materials on the Aptus Pi. More Nakadoli members have purchased smartphones, which is also helping with access.

YCT in Nigeria has now supported 60 master craftspersons to fill gaps in their theoretical understanding through online learning. At the time of this writing, these master craftspersons were collecting evidence of competence to meet assessment requirements for formal national qualifications. They have also started training 28 apprentices in the workplace, with lecturers from YCT supporting the apprentices by means of distance learning. The vision was to quickly scale the model through each master craftsperson, training several apprentices. However, apprentices have struggled to afford the fees without the funding support available for other models of training.

Initially, some COMTEAN master craftspersons and apprentices found it difficult to learn online. They were not used to this way of learning. The YCT team used WhatsApp, which the learners were more familiar with, to motivate and support them to access and work within the learning management system.

LTBC in Zambia is in the process of training 12 master craftspersons and 59 apprentices, the majority of whom live below the poverty line. The original model assumed increased affordability by using physical spaces and equipment within workplaces to train apprentices. However, the Nakadoli Furniture Cooperative hires machinery from private individuals in the market square and a skills training institute, which limits their access. In the short term, each Nakadoli master craftsperson is training three apprentices at one LTBC-based workstation. In the long term, as Nakadoli increases its productivity and profits, they hope to be able to purchase their own equipment and remove the need to travel to LTBC to train apprentices.

KTTC has identified just over 400 master craftspersons to start training in late 2022.

Influence National Skills and Entrepreneurship Systems

COL's overall approach includes scaling the model within and across countries and skill areas by influencing those making decisions regarding national skills systems.

YCT has been active in promoting the Skills in Demand model, hosting webinars to build awareness of their new way of working and meeting with senior government officials to bring them along on their journey. YCT management has adopted workplace plus online learning as their training model for welding, masonry and mobile app development.

Nigeria's National Board for Technical Education, the regulatory body for TVET in Nigeria, was also impressed by the Skills in Demand model and secured 250 million naira (USD 600,000) in funding from Nigeria's Tertiary Education Trust Fund (TETFUND) to enable apprentices to train for free and receive a basic stipend, thus overcoming major barriers to the uptake of the training.

Zambia's Technical Education, Vocational and Entrepreneurial Training Authority (TEVETA) is actively supporting LTBC's implementation of the Skills in Demand model. TEVETA plans to make LTBC's open education resources available through its centralised learning management system so that other Zambian institutions can use them. Recently, Zambia announced the Constituency Development Fund, from which cooperatives such as the Nakadoli Furniture Cooperative can seek funding. As a trusted partner, LTBC can support them in applying for funds.

In Kenya, the Industry Advisory Committee is the mechanism to enable relevant government agencies to travel the journey with the team. It includes representation from the National Industrial Training Authority, State Department for Post Training & Skills Development, Kenya Qualifications Framework Authority, the TVET Authority, as well as the national federation of artisan associations, master craftspersons and teacher educators.

Conclusion

COL's Skills in Demand model includes all elements along the education, training and work continuum. Learners gain formal qualifications through:

- Education - online learning and assessment of theory.
- Training in the workplace guided by online materials, supported by academics at a distance and master craftspersons.
- Work as they practice their skills and collect evidence of their growing competence.

While still in the early stages of implementation, the results promise an alternative approach to overcoming TVET challenges facing African countries as they seek to upskill their young people for employment and move to become middle income economies.

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Endnotes

1. The five online courses developed by COL to build capability are freely available for study and reuse:

   Outcomes - https://course.oeru.org/ctvsd1/
   Assessment - https://course.oeru.org/ctvsd2/
   Resources - https://course.oeru.org/ctvsd3/
   Activities - https://course.oeru.org/ctvsd4/
   Support - https://course.oeru.org/ctvsd5/

The Relevance of Gender in the (Re) production of Education, Training and Work (Dis)continuities

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Summary

Imaginaries of development foster a very particular idea of success for women: educated and employed. This paper explores the problematic discontinuities in the education, training and work path to success for Sherpa women in Nepal. It also examines critical factors in the (re)construction of the education-training-work continuum through a gender lens, in response to the calls to explore broader understandings of education, training and work.

Keywords

Education
Work
Continuum
Discontinuities
Gender

Introduction

The multiple crises the world is facing have put on the table, once again, the need to address the increasing inequalities within the fields of education, training and work. Particularly from a gender perspective, as women still need to overcome exclusion, discrimination and violence, making lifelong learning (LLL) a dream rather than a reality.

Many efforts have been made to eliminate the barriers and guarantee access to education for all, including closing the gender gap in school enrolment between boys and girls[2]. But looking beyond access, other problems arise, such as the difficulties of continuance, including dropouts and few opportunities for (re)engagement. Moreover, formal education does not always guarantee access to the labour market, and when it does, women tend to be placed in the most precarious work conditions. Research has identified transitions as vulnerable moments, particularly for girls, and the risk of disengagement from education-training-work itineraries (Anderson et al., 2000). Transitions in life stages also appear to take a bigger toll on women and their careers. Thus, education-training-work discontinuities and their problems must be analysed through a gender lens.

In Nepal, young women have high expectations of becoming "bikasi" (developed), a notion intimately linked to modern knowledge, skills, and work. However, their paths are often interrupted as education-training-work discontinuities arise. This paper reflects on the factors involved in such discontinuities and why they are particularly significant for women. It builds upon a multi-sited ethnography, conducted in Gaun (a Himalayan village) and Kathmandu, from 2012 to 2019, among women and girls of Sherpa ethnicity.

Education-Training-Work Continuum and Women: Single Pathway, Multiple Discontinuities

Development discourses promote the idea of progress based on the concatenation of accomplishments in education, training and work. In Nepal, development is rooted in notions of consciousness and work (Pigg, 1992). On the one hand, schooling is one of the main institutions of a "bikasi", which

relates to modern forms of knowledge. On the other hand, development also refers to jobs within urban and market economies, as opposed to rural modes of production and subsistence work. Thus, becoming "bikasi" is not only a matter of becoming educated, but also embracing the urban economies and modern ways of living. However, the implications of the education, training and work model of success have been overlooked from a gender perspective. For women, formal education is assumed to provide not only more and better job opportunities, but also the skills and means to be independent. Nonetheless, such rhetoric needs to be reconsidered, as education, training and work discontinuities are the reality for many young girls in Nepal.

A common discontinuity involves the quality of education. Young girl's educational paths are challenged during the transition from primary to upper levels of education. Due to the poor quality of primary education, they find it difficult to engage in secondary schools. Several students from Gaun needed to be set back one or two years to be able to follow the classes.

A second factor is the rural to urban transition. Youngsters from rural backgrounds need to move to cities to continue studying. In the Himalayas, secondary levels are usually accessible in nearby villages, where girls live during the week. The cost of the hostels, the dangers of living alone at a young age, and the loss of their help in their households are concerns of Gaun's young girls and their families. Higher education is mostly based in Kathmandu, where students move for longer periods. The living arrangements vary, but it is common to live with relatives and combine work and studies.

A third discontinuity regards education-to-work transitions. Whereas cities are seen as having job opportunities, the real chances of getting jobs are limited and difficult. Previous research has pointed to a gender bias, as men are less often required to be educated to access jobs, while for women, it is an unnegotiable condition (Castellsagué & Carrasco, 2022). Young girls moving to Kathmandu seem to be caught in a paradox: they need to work to finance their studies, but, at the same time, they need the degree to access jobs. Mature women see themselves relegated to care and domestic work or (re)imagining work possibilities according to their networks and informal means (Castellsagué & Carrasco, 2022).

The aforementioned factors show the complexities of education, training and work progression from a gender perspective. Far from a straight, linear and chronological path to women's success, it is rather a bumpy road in which discontinuities are constantly challenging the desired education, training and work outcomes. At a personal level, young girls feel discouraged, and their self-esteem and sense of capability are challenged. Failure is a common feeling for those "in-between" who have already moved on from their communities but cannot fully become modern women. At a social level, whereas education, training and work is seen as an empowering pathway in hegemonic gender and development paradigms, it can result in less desired situations: low-paid jobs, precarious work conditions, exploitation, and human trafficking.

The (Re)construction of Continuums

The notion of a continuum arises as a potential paradigm that can be used to address and overcome discontinuities and ensure the inclusion of those currently excluded from education, training and work (Carton & Mellet, 2021). However, I will not consider the continuum as a new notion, but rather as a common feature in most of the pre-modern ways of organising education, training and work. Modernity is in itself a discontinuity because of the pace, scope and nature of the changes in education, training and work. The development of education systems has prioritised schooling over other spaces and forms of learning (Levinson & Holland, 1996). Similarly, industrial modes of production have legitimised production work over care and reproductive activities needed to sustain life (Federici, 2012).

The (re)construction of the education, training and work continuum offers at least two ways to go in terms of gender. On one hand, the dominant approach is to guarantee women's continuity in education, training and work hegemonic spaces and institutions. Knowing that ensuring access is not enough, the focus must move towards the quality of schooling and training and the elimination of gender discrimination and violence. Special attention must be paid to transitions, as well as to providing network-building opportunities that can endure the artificial compartmentalisation of education, training and work.

On the other hand, a less explored possibility is to radically transform the conception of education, training and work, valuing other ways of doing in which women already play a central role. This could involve four approaches.

First, (re)considering the school as the only space of learning. From an anthropological perspective, discontinuities are part of the transmission and acquisition of culture, yet schooling involves a new kind of discontinuity, as it disarticulates learning contents, methods, and experiences from the social and ecological environment (Spindler, 1987). It is necessary to broaden the idea of school and knowledge, towards formats that are more situated, contextualised, and connected to the communities.

Second, recognizing the role of women in education, training and work. Traditionally, women have been responsible for the transmission of culture and knowledge keepers. In Gaun, it is so regarding many aspects of the living and the community

organisation among the Sherpas. Nonetheless, the processes of institutionalisation are displacing women from such roles, as the relationships, spaces, and contents of the schools tend to be disconnected from the community and male-dominated. Also, elder women are considered "uneducated" and "abikasi" (not developed) and are no longer role models for young girls. Thus, it is necessary to acknowledge and legitimise women's leadership in education, training and work.

Third, restoring the holistic spaces of education, training and work. By institutionalising learning spaces, modern societies have separated education from other social activities. Moreover, the prevailing idea of childhood prioritises education over work and consumption over production. Consequently, the incorporation of the new generations into training environments has been delayed and specialised, as it is no longer performed within the communities. In Gaun, training in many aspects of livelihood starts at a young age and develops gradually following a guided participation methodology (Rogoff, 1990). It is organised within intergenerational and flexible spaces of interaction, the transmission of knowledge and skills is not linear, and care work is included. It is through such opportunities of learning by doing that women in Gaun create networks that are critical for their power within the Sherpa community.

Finally, (re)building local economies. Rurality has been undervalued and associated with heavy workloads and the "old ways" of doing. Work in Gaun is not based on the distinction between productive and reproductive but instead understood as a whole, and women lead decisions about production and resource and time management. By contrast, cities and "modern jobs" are based on the sexual division of labour, in which women tend to be relegated to domestic and care work (Castellsagué & Carrasco, 2022). Respect for rural economies and living is critical to sustainability and the future of the planet.

To conclude, it must be said that neither of the approaches can be blind to existing inequalities nor romanticise any way of living. Transitions and discontinuities can also be opportunities for change and spaces to (re)imagine gender identities and overcome power relations. However, we need to problematise the belief that education, training and work is the only and legitimate way to women's success and empowerment. Currently overlooked or marginalised ways of knowing, training and working have the potential to make sure no one is left behind in the path of inclusion.

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Endnotes

1. Financed by the Juan de la Cierva Fellowship Program "FJC2020-045681-I /MCIN/AEI/ 10.13039/501100011033" and by the European Union "Next Generation EU / PRTR".
2. See the Education for All Monitoring Report entitled "Gender and EFA 2000-2015: Achievements and Challenges", available online: https://unesdoc.unesco.org/ark:/48223/pf0000234809.locale=en

From Vertical to Horizontal Knowledge Transmission through Intergenerational Learning in Mali

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Summary
The generation gap is often interpreted as a source of tension in businesses or in learning situations. Yet, the intergenerational continuum stimulates the quality of learning and the integration of young people, as demonstrated in three education and training initiatives in Mali. The concept of learning, based on vertical transmission from the "master" to the "learner", is being challenged, with preference given to horizontal and bidirectional knowledge transmission between generations.

Keywords
Traditional Apprenticeship
Continuum
Intergenerational Learning
Knowledge Transfer

Context

In "traditional" African societies, intergenerational transmission has been done orally and by imitation, which constitutes didactic transposition (Colomb et al., 1986), that is, the transmission from the senior person to the junior one or from the more experienced to the learner in the areas of agriculture, crafts, livestock breeding, music, songs etc. In this model of learning, the vertical, linear transmission also implies a degree of authority or ascendancy, a certain indebtedness to the "master" or "elder". This perception of the transmission of knowledge, which is evident in various "traditional" societies (rites, music, crafts, agriculture etc.), is based on the fact that each generation has a duty to hand down its knowledge, skills and values to the next generation in order to perpetuate human life.

The young person who learns from a master owes the teacher respect and gratitude and even a degree of submission. Rarely is there a mention of an adult who has learned from a young person! In this model, vertical transmission goes hand in hand with a certain status of authority for the older one and indebtedness from the younger one (or the learner) towards the "master" or "elder".

This mode of transmission gives little value to the interaction in which they are both learning from each other, nor the critical exchanges between the learner and the "master", between the younger one who is supposed to learn from the older one who is assumed to hold the knowledge. This vertical conception of transmission ignores the contribution of the younger one to the elder. This mode of transmission has been perpetuated through the education and training systems inherited from colonisation and characterised by vertical knowledge transmission. The spaces between education, vocational training and work are often the reflection of the quasi-silo nature of these three worlds.

Digital and other modes of learning used in various educational contexts and vocational training have disrupted the vertical model of learning from the senior to the younger,

forcing horizontal interactions. For example, many adults are overwhelmed by the acceleration of digital technology, as confirmed by questions such as: “I just received a bill, and I don”t know how to pay online”; “How do you create a profile on WhatsApp?”; “How does Facebook work?” and “How do I attach a file?” These questions are common within families in Europe, Africa and Asia.

Our work situations, as well as our learning systems, are forcing us to engage with our peers, whether younger or older, more or less experienced, in a dynamic where each actor expands their experience through interactions with those around them, by mobilising cooperation and/or mutual learning (Clark et al., 1996).

In this article, we focus on two dimensions of an intergenerational continuum through the experience of vocational and educational training projects developed in Mali and other sub-Saharan African countries and focus on two research questions:

1. How is an intergenerational continuum developed in vocational and education training programmes?

2. What are the benefits of acquiring knowledge through intergenerational learning and the lessons learned?

Intergenerational Continuum and Discontinuities in Learning: Benefits and Lessons Learned in Sub-Saharan Africa

The period from the 1990s to the present has seen innovations in education/training in sub-Saharan Africa in response to the inadequacies of both the formal vocational and education training systems in place and the challenges of Education For All.

These experiences involved out-of-school children, early school leavers and adults against the backdrop of an implicitly established principle of intergenerational continuity. We observed that the creation of an educational continuum between generations influenced qualitative knowledge and skills acquisition by various groups and helped facilitate access to the job market. This implies a possible reduction in the quality of knowledge shared when the bi-directionality of intergenerational cross-fertilisation is not recognised and accepted; consequently, this may hinder access to the job market at a later stage.

In some non-formal education and/or vocational training programmes, such bi-directionality takes the form of interaction between the father or mother who is learning French and the son or daughter who is attending elementary school. It can also be the relationship between the master craftsman who “learned on the job” and the apprentice who attends a theoretical and practical education system (dual-type apprenticeship) where the master learns some mechanical theory from the apprentice.

Another example is the young person enrolled in vocational training in agriculture or cooperative management who introduces into the family farm the skills gained in agroecology, cooperative management or animal health. In the same way, various non-formal education programmes have highlighted the importance of intergenerational learning as a key factor in improving the quality of learning and training.

The intergenerational approach thus invites reflection on the consequences that action/inaction by politicians and/or education and training specialists may have on the modes of knowledge transmission and the education–training–integration continuum.

The intergenerational continuum is evident in Mali’s Programme D’appui à l’ Education Non Formelle (Program to Support Non-formal Education [PENF], 2011–2024). In this programme, core education facilitates the return of school dropouts to the formal education system, but it also prepares them to take an interest in manual trades and production activities where their parents also act as “teachers”. Conversely, children who are literate in their national language[1] help their parents who have enrolled in literacy or technical training courses to find solutions to their learning difficulties, and also to use digital tools, which are becoming indispensable learning aids.

The Baara (Work) and Jigitugu (Hope) projects, also in Mali, implemented from 2016–2018 and 2019–2022, respectively, which aimed to train young people and help them return to the family farm, have helped improve the quality and productivity of the farms. The Baara project, intended to train 300 young people, actually trained 375, 280 of whom gained direct access to jobs. The Jigitugu project, which aimed to train 1,000 young people over three years, trained 2,080, 1,373 of whom found work quickly (including 279 women). With new technologies and social networks, these young people are modernising their farms, which have become testing fields and learning spaces for their communities. Adults learn new practices from young people who attend training courses or participate in exchange visits. Successful results from these testing fields lead adults to adopt these methods.

Thus, in the three programmes, the intersection between the education/training programmes offered to different and complementary generations (children–youth–adults) brings about intergenerational support and collaboration. This leads to an awareness of generational interdependence and creates horizontal, two-way learning mechanisms in which each group feels indebted to the other.

The acceptance and value placed on the reciprocal recognition of knowledge and intellectual, financial or in-kind contributions from members of different generations in these projects has helped stimulate learning and diversify the pathways for acquiring knowledge and know-how. They have also helped launch structural initiatives on family farms involving members of different generations. No longer do we see only young people learning from adults, but also adults who develop their knowledge and know-how thanks to the young.

In the agricultural sector, new production methods or new agricultural species have been introduced and promoted thanks to this dialogue between generations. The integration of these intergenerational transactions into the learning model thus places the stakeholders in the system on an equal footing, where each person is recognised for their skills, where one stimulates the other, and where both collaborate to complete complex tasks.

Benefits of Intergenerational Transactions in Improving an ETIC

Approaches focused on mutual learning and knowledge co-construction rightly recognise that horizontal knowledge and skills sharing has the advantage of making each learner, of any age, a valued actor in the construction of knowledge for themselves, as well as for their co-learners. In other words, learning is always more effective with others (Verret, 1975).

On a conceptual level, recognising the value of an intergenerational continuum in an education, training and work system effectively breaks down the psychological and traditional barriers that sometimes hinder the consideration, recognition and sharing of knowledge and opportunities in groups of different generations. The acknowledgement of intergenerational continuity in the three projects described above led to increased acceptance and funding of the training and integration by the young people's family and community.

In terms of knowledge and skills acquisition, these observations can lead to proposals to improve the wider education, training and work articulation (where integration is an action related to work) where there is a strong demand for education, training and employment from young people. This also reinforces the continuity of learning spheres from one generation to another, thus involving learners of all ages.

On an emotional and social level, the intergenerational approach emphasises mutual support and values everyone's role and competence. This seems to be more efficient and socially beneficial for the groups, for the education and training system and for the quality of the resulting skills and production.

In political terms, the key impact from the application of an intergenerational continuum in the medium and long term in sub-Saharan Africa would be a decrease in social tensions and in the risk of seeing young people forced to move away as they face a chronic lack of prospects and well-being, in the absence of appropriate responses from the system to their deep aspirations. These young people are exposed to the attractions of the modern world, but also to pressures from extremist groups (UNDP, 2017) that do not always give them a choice.

Conclusion

The above observations clearly show that refusing to integrate an intergenerational continuum in education and training would not only distort the quality of knowledge acquisition, but could also negatively impact effective integration. Unlike the idea that generational differences are possible areas of tension (Grima, 2007)[2], these thoughts open a pathway to help conceptualise the notion of an ETIC.

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Endnotes

1. Mali has 13 national languages in accordance with Article 1 of Decree No.159 PG-RM dated 19 July 1982: Bambara, Bobo, Bozo, Dogon, Fulfulde, Soninke, Songhay, Senoufo-Minianka, Tamasheq, Hassaniya, Kassonke, Madenkan and Maninkakan.
2. According to Grima (p. 29), intergenerational conflict is defined as "difficulties in working with persons of a different generation, or even preference for working with persons of the same generation".

Part 2

Looking for Solutions to Education, Training and Work Discontinuities: Innovations and Experiments in the 1990's

One Hundred Years of Vocational Education and Training (VET) Discourses[1]

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Summary
This article captures the variety of approaches to vocational education and training (VET) through a series of different lenses over 100 years. These have included the impact of racism and colonialism, the link to aid policies, the connection to the informal sector as well as to employment policies and the broadening of the meaning of VET by the adoption of the term, skills development.

Keywords
VET Politics
Informal Sector
Formalisation
Development Agencies
Skills Development

Introduction

This piece captures the rich variety of approaches to VET through a series of different lenses over 100 years. The historical periodisation of vocational education and training (VET), right back into the colonial period, is a crucial first lens. The notion that VET was particularly appropriate for specific groups of people was evident in different colonial regimes. Thereafter, development cooperation agencies pursued many different policies on VET, and these changed markedly over time. Because of VET's close linkage with work and employment, there have been many priorities for VET that have reflected political concerns with its possible role in dealing with the threat of educated unemployment. These would include the connection between VET and the informal sector of the economy. In parallel, there has been widespread policy interest in the link between non-formal education and VET. The awareness of the relevance of skills beyond formal education and training has led to the adoption in many quarters of the wider term, skills development. The actual terminology for varieties of VET or skills development has proven hugely important to the way that these fields were covered in the major international agreements about support to education worldwide. Equally, it has been vital to tease out VET's connections with science and technology, as well as with enterprise development.

The discourses around VET have altered a good deal over the century, but one thing has remained constant in its history: it has been treated differently from other sectors like secondary and higher education, as it has been claimed to have a close connection with the worlds of work and employment. This has made it a more political sector when VET priorities and approaches have been discussed.

VET Lenses through 100 years

Industrial Education for Blacks in the USA and Africa

One of the earliest examples of this VET politics in the modern period was the debate in the 1920s about the appropriacy of what was termed industrial education for Blacks in the southern states of the USA. This was linked to the industrial training traditions associated with Booker T. Washington

of Tuskegee Institute versus those associated with W.E.B. Dubois who argued the need for college education for young Blacks. This debate about the particular relevance of industrial education for Blacks was transferred to sub-Saharan Africa through the work of the Phelps-Stokes Education Commissions, and was widely supported by missionary societies and the colonial governments of the time. It appealed particularly to the white settlement countries of Africa. What would now be termed an example of policy transfer from the USA to Africa was deeply contested by critical analysts of education "adapted" to Africa and to Africans.

VET and Cooperation Agencies

A second example of the politics of VET is associated with the development agencies. From the very first education project of the World Bank in 1963, which happened to be in Africa, it was argued that education for developing economies, including in Africa, should be "diversified" and "vocationalised" on the grounds that general secondary education was "dysfunctional" for most employment (World Bank, 1974. p. 21). This priority for secondary education to be diversified lasted for almost twenty years. This emphasis by the World Bank could also be seen in the approaches of several other donor agencies at the time, including those from Sweden, Denmark, UK, Canada, Germany and the USA.

VET in the Informal Sector

The next important step which involved VET was the discovery of the informal sector or the informal economy in the early 1970s. Again this took place in Africa, and it pointed to the fact that very large proportions of the working population in urban and rural areas were outside the wage and salary systems of the formal sector with its sick pay, leave and tax. In parallel with their informal working conditions, it was recognised that there was an informal learning or apprenticeship system. This was a world away from the training in the great apprenticeship nations of Switzerland, Germany and Austria, but it nevertheless built and transferred VET skills to young men and women. This informal system of "learning on the job" was very widespread across most skilled work, and it was later noted that variations of informally learning on the job were also commonplace inside the so-called formal economy.

Many VET planners in development agencies did not appreciate the fact that the great bulk of all VET training in developing countries was being handled informally. There consequently were numerous schemes launched which aimed to "formalise" these massive informal training systems. Few of these succeeded beyond their pilot stages.

Informal Sector Training and Non-Formal Education

A rather different approach to these indigenous apprenticeship systems was taken by a movement that ran almost in parallel with the new terminology of the informal sector; this was the recognition from 1969 of the world of non-formal education (NFE). Like the informal economy, this covered a vast range of organised learning and training activities taking place outside the confines of formal primary, secondary and tertiary education. Naturally, the NFE movement recognised the informal apprenticeship systems as good examples of the variety of non-formal education and training. It could be seen that the huge informal economy and the massive extent of non-formal education had some common characteristics. Intriguingly, both the concepts of NFE and the informal economy continue to be analysed and utilised today, 50 years after they were first developed.

VET and the Private Sector

Another key marker in the historical discourses around VET came, again, from the World Bank in 1991 with the publication of its first major policy document on VET. This argued persuasively, but provocatively, that there was a key role for the private sector in VET. The first page of this paper said it forcefully: "Training in the private sector – by private employers and in private training institutions – can be the most effective and efficient way to develop the skills of the work force" (World Bank, 1991. p. 7). The policy made the point that the massive world of informal sector training was itself part of the private sector. There can be little doubt that this World Bank paper dramatically reduced some aid agency support for VET in the public sector.

Broadening VET to Skills Development

But the Bank's policy paper did something else very novel in shaping the discourses around VET; it used the term "skills development" (World Bank, 1991, p. 2). This did something very valuable to the analysis of VET, and to an extent, it profited from the discussions around learning on the job and non-formal education and training. It captured the much wider worlds beyond the formal technical and vocational training systems which the term VET had tended to embrace. From this point, the term skills development began to enter the mainstream discourse.

VET, STEM and Enterprise Development

There were several other spheres where VET or skills development were recognised as natural companions. For one thing, VET was seen to be closely linked to science and technology education. Hence, when there is talk of the subjects science, technology, engineering and mathematics (STEM), it should be natural for VET to be associated, though this is not always the case. A second natural connectivity with VET and skills development is enterprise development. Clearly, there are close relationships between enterprise development and the informal sector, and particularly with the huge range of self-employment within that sector.

VET and SDG 4

The last area where VET has secured a key strategic position in the discourse is in the SDGs, and most particularly in SDG 4 on Education. The VET community was determined to ensure that there was due recognition of technical education and vocational training, and of skills development more generally. Not only was "affordable and quality technical, vocational and tertiary education" captured in target 4.3 of SDG 4, but it was made quite clear in target 4.4 that the concern was not with life skills but work skills: "relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship" (United National General Assembly, 2015, p. 29). It was a victory to get VET included in SDG 4, but it would be equally critical to ensure that the global indicators for judging progress towards the targets also supported these key aspects of skills development.

In this brief historical safari around the developing discourses of VET and skills development, it has been essential to draw on insights from academics and from members of development agencies, as well as from the participants in VET and skills development systems. The latter have, of course, included both the formal and informal sectors of the economy, and both formal and non-formal education.

Though we have picked out eight different angles to shed light on VET, there have been some elements of continuity over the century. VET may have been politicised, linked to policy on job creation, promoted as central to the private sector, included in the SDG agenda and broadened to include informal and non-formal skills development, but it retains a crucial and continuing role in human development (McGrath, 2018, p. 138).

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Endnotes

1. The ideas in this short piece are elaborated with full references in King (2020), which appears in the reference list.

Supporting Education–Training–Work Continuum: An Activity Theory Analysis of National Qualifications Frameworks

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Summary

A national qualifications framework (NQF) can be a tool to facilitate mutual dialogue and cooperation between stakeholders in a continuum approach and thus pave a way to break the silos that exist between these stakeholders. This contribution explores the social dimension of NQFs using cultural history activity theory to bring new insights to the fractured continuum.

Keywords

National Qualification Framework
Activity Theory
Education
Training
Work

Introduction

Individuals see education as a pathway to work. Governments see education as a pathway to an improved economy. Improving educational systems therefore has been a top priority for many developing countries as they face challenges in the continuum of education, training and work (education, training and work). One of the initiatives employed by developing countries to combat this challenge is through the development and implementation of a national qualifications framework (NQF) as an educational policy intervention to bring stakeholders from education, training and the workplace together for mutual dialogue and collaboration. NQFs are social constructs, and the practical issues in getting the cooperation and coordination of its various stakeholders in education and work has been challenging (Allais et al., 2009; Manogaran, 2021). This contribution extends the empirical research done on the NQFs of the United Arab Emirates, Bahrain and Oman (Manogaran, 2021) and puts forward the idea of the NQF as an activity system that can respond to the fractured continuum in education, training and work.

National Qualification Framework

An NQF is a mechanism that can facilitate communication, coordination and collaboration within the systems of education, training and work (Bolton & Keevy, 2011). In the field of education, an NQF is expected to enhance quality and quality assurance of qualifications. In the field of work, an NQF is expected to address challenges in the recognition of qualifications and skills by the labour market, address skill shortages, improve accessibility of qualifications, provide more flexibility and mobility and facilitate career changes, including cross border mobility of learners and workers (Deij, 2009).

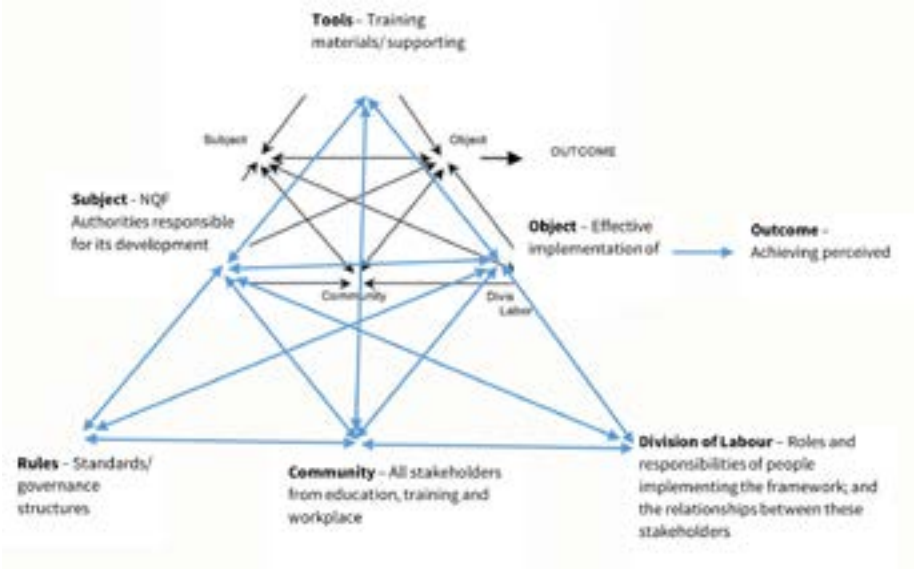
The NQF had its origin in the 1990s, initially developed by the Anglophone countries. It has continued to be implemented by many developing countries through a policy borrowing

process (Chakroun & Keevy, 2018; Manogaran, 2021). NQFs are considered as social constructs as their meanings are negotiated by people based on their deeply rooted relationships and conflicting interests (Bolton & Keevy, 2011). As social constructs, research has shown that, NQFs cannot be quickly borrowed and implemented and a quick approach for short-term gains can overlook the long-term effect on effective stakeholder interaction and involvement (Allais et al., 2009). In order to expand the understanding of the complexity of the challenges in coordination among the various stakeholders of an NQF, Engeström's (1999) cultural history activity theory is used.

Activity System

Engeström's (1999) model of an activity system has been employed in a number of studies to explore educational and learning issues. This model highlights a systemic view of human activity within a social system, such as a community, that is continuously negotiated through tasks and powers and mediated by rules and tools. The structure of the social activity as put forward by Engeström in nested triangles is shown in Figure 1.

Figure 1.



The activity triangle in this system consists of six components – subject, object, tools, rules, community and division of labour. All six components interrelate and form an activity where an outcome is generated after the transformation (Engeström, 1999). The components are defined as follows:

- Subject can be an individual or group whose viewpoint forms the analysis.
- Object is the problem or situation to which the activity is directed.
- Tools are the mediating artefacts used to achieve the object.
- Community is the individuals or groups other than the subject who share the same object.
- Rules are regulations or norms that can be implicit and/or explicit of how subjects must fit into the community.
- Division of labour is the way roles and hierarchies are structured and/or the division of activities among actors in the system.

These nested triangles provide a theoretical idea of what an activity is comprised of, with the two-way arrows showing the dynamic nature of the nodes of the triangle where expansive learning takes place (Bolton & Keevy, 2011).

The Activity System of the NQF

Activity theory embraces the notion that an activity is carried out within a community, in a social context. The primary unit of activity in this case is the NQF. The six components of this activity at each of the nodes are shown in Figure 2.

The interacting activity systems in this case are (i) the qualifications framework authority that is responsible for the development and implementation of the framework, (ii) community that consists of all stakeholders from education, training and the workplace and (iii) implementing bodies

of NQF. The relationship between the subject, the NQF developing and implementing authority, and the object, the effective implementation of NQFs, is mediated through tools. The relationship between the subject and the community, stakeholders of the NQF is, mediated by rules. Likewise, the relationship between the community and the object is mediated by the division of labour. Ultimately, all the nodes in the activity system have an influence on the successful outcome of the object.

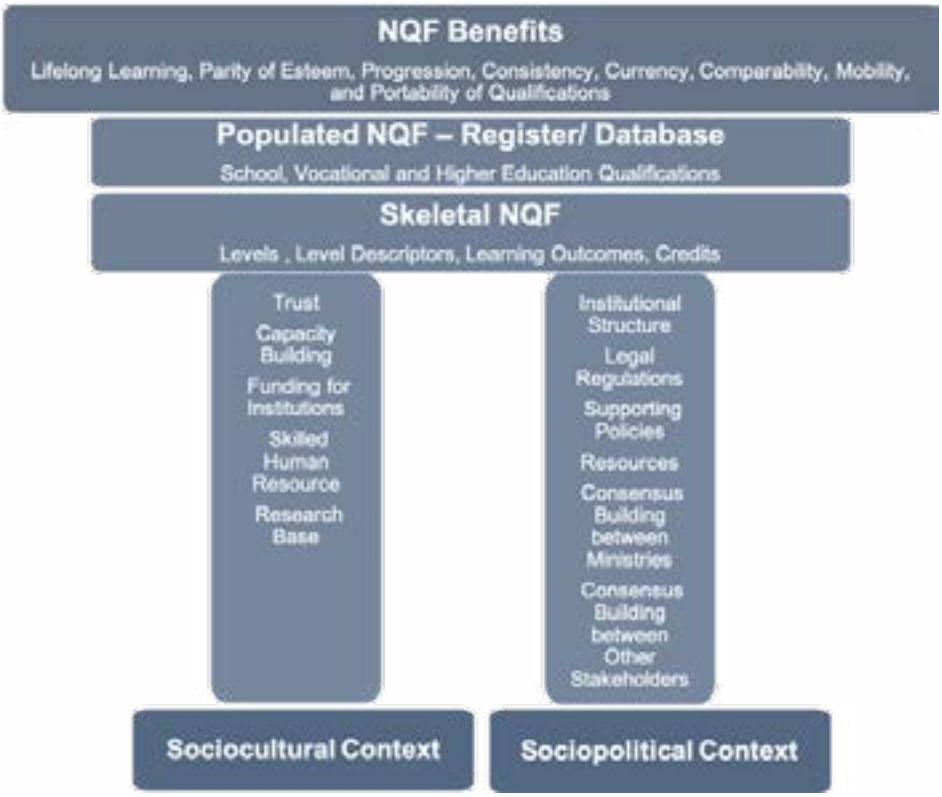
If bringing together stakeholders in education, training and work is the intended outcome, then failure to bring them together is the unintended outcome. Unintended outcomes signal the presence of contradictions (Miles, 2020). Contradictions are disruptions or tensions in an activity system. At the same time, contradictions can also be drivers of learning and change because actors in the system then respond to these disturbances (Bolton & Keevy, 2011). For example, research has shown that some of the barriers include lack of cooperation between stakeholders, power struggle between stakeholders and resistance to dialogue (Keevy & Chakroun, 2015). These barriers can cause tensions and contradictions within the activity system. When contradictions accumulate, it can lead to loss of direction and the production of more disturbances (Olvitt, 2010), and, ultimately, slow down the progress of the activity.

Contradictions and Expansive Learning

Engeström (1999) identified four types of contradictions that can occur in an activity system. Primary contradiction occurs within the elements of an activity system, secondary contradiction occurs among the elements themselves, tertiary contradiction occurs between the different forms of the same activity system and quaternary contradiction occurs between two activity systems. By analysing the contradictions at the respective nodes, tensions and contradictions within and between the interacting activity systems can be resolved. This process where people engaged in a collective activity transform the activity through reconceptualisation of the object by embracing wider possibilities is known as expansive learning (Engeström, 2001). As activity systems move through long cycles, expansive learning occurs at the nodes due to the contradictions, according to Engeström.

NQFs have multiple interacting activity systems, each having multiple points of view, traditions and interests. NQFs are influenced by rules and artefacts, but these are often at odds with the sociocultural context of the subject and the community. Manogaran (2021) explained the sociocultural and sociopolitical features of an NQF that are crucial for its effectiveness in bringing its stakeholders in education, training and work together as shown at Figure 2.

Figure 2.



A skeletal NQF that does not have any qualifications listed on it may not be able to serve the purpose that it was created for and hence needs to be populated with qualifications, and this necessitates the two pillars for its support. The elements in the two pillars as shown at Figure 3 that support effective implementation of NQFs, such as building trust, building capacity, obtaining funding, ensuring legal regulations and getting consensus among the stakeholders involved in the NQFs, can cause many contradictions. As result, this will require more time for expansive learning, as NQFs are social constructs that require cooperation and coordination between and among its various stakeholders. These systematic contradictions can be fully understood when the sociocultural and sociopolitical influences are made explicit.

Conclusion

An NQF aspires to incorporate all parts of education, training and work into an integrated system. The success of NQFs in bringing stakeholders of education, training and work together are developed based on negotiation and cooperation, hence the activity system at every node needs to work and stakeholders at all levels need to interact with each other continuously in order to transform the system. NQFs exhibit Engeström's (2001) principle of historicity as they are dynamic entities and take a long time to embed into the social fabric of a country. NQFs can be used as tools to break the silos in education, training and work; however, more exacting research is required to explore and analyse the contractions and tensions at the nodes to inform expansive learning. This article intends to open a dialogue in this area.

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Complementing Vocational Training, Secondary Education and Youth Integration in Argentina

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Summary
This article analyses the gradual development of interactions between the different levels and types of vocational training and secondary and tertiary education (vocational education and training [VET]) in Argentina. Focusing on short VET, the article shows that VET has shifted from a social remediation role to one of complementarity with secondary and tertiary education credentials.

Keywords
Vocational Training
Secondary Education
Youth
Public Policies
Decent Work

Introduction: Discontinuities and New Interactions for Education, Training and Work

The interactions involving education, training and decent work generally present many discontinuities that particularly impact the underprivileged. The gradual development of interactions involved with these continuum components brings about social and job opportunities (Carton & Mellet, 2021). The situation in Argentina used to be characterised by the modelling of vocational education and training (VET) within the education system along the same lines as work and employment, but, since the 2000s, the institutional forms and functions of secondary education, in general, and technical and vocational training, in particular, have undergone a change of configuration. Within this framework, this article analyses the new interactions of short VET courses (with the different levels and types of technical and vocational training and with secondary and tertiary education), which currently seem to act as a complement to secondary education credentials in transitioning to decent work.

Reconfigurations

The Persistence of Discontinuities

The Argentine education and employment system is designed on universalist principles, according to which the State provides all levels of education free of charge, without explicit selection systems such as entrance examinations. Secondary education is on an increasingly large scale, but completion rates are low: only 60% of students aged 18 to 24 obtain the baccalaureate, and there is a strong correlation between completion rates and family socioeconomic level (Bertranou et al., 2017).

Argentina is a peripheral country, affected by successive economic crises and characterised by strong inequalities (beyond the presence of one of the largest middle classes in Latin America); work transformations take place within a context of segmentation marked by persistent informal employment (about 35% of employment), in a highly segmented job market. The youth unemployment rate is 24%; 57% of young people work in the informal sector. The

completion of compulsory secondary education is a strong factor in gaining access to the job market: of those in formal employment, almost 84% completed secondary education (Bertranou et al., 2017).

Although short courses have long existed in the country, this type of VET has not been valued in the hierarchy of credentials. Trade unions, which played a fundamental role in promoting workers' VET in the past, were pushed aside, due to the dictatorships and resulting bans. Until late last century, short VET was placed in the non-formal education system, with no linkage to the rest of the educational system, and was characterised by its limited resources (Spinosa & Testa, 2009).

New Trends in the Integration with Secondary Education

In the 2000s, the situation changed with a new law which set up a National Fund to provide funding for the improvement of Technical and Vocational Education[1] (0.2% of the annual budget's current income).

Vocational training per se (short courses, like the French CAP) is intended for young people over the age of 16 and adults. This form of training currently consists of courses defined around job profiles, which comprise a set of modules totalling some 2,000 training hours, aiming to provide qualifications at the level of semi-skilled and skilled workers. This VET targets various group profiles, ranging from school dropouts to high school graduates and adult workers who frequently work in the informal economy: 390,693 participants enrolled in 2019 (Ministerio de Educación de la Nación Argentina, 2020). Certifications confirming the job profile are issued, but they are not propaedeutic.

Since the implementation of the above-mentioned law, closer links between general secondary education and vocational training have been observed. After much debate, a federal agreement began in 2019 to promote integrated initiatives between secondary education and VET. In 2022, a new model of secondary vocational education was created, which provides a trade qualification (in the chosen field) and a secondary education credential.

Alongside the VET of an educational nature, another model of VET, based on job market "demand", has also become significant in the period in question. With the support of the Ministry of Labour, VET has launched many initiatives based on a tripartite dialogue. On this basis, networks of institutions connected to certain economic sectors were established, with much weight given to the trade unions. These courses are defined around skills to be developed by the Sectoral Councils of Lifelong Learning and Work Skills Certification, with the participation of trade unions, social organisations and chambers of commerce operating in a specific economic sector. The courses, which are 30 to 200 hours long, meet the social partners' requests for lifelong vocational training. The courses are intended for employed or unemployed workers (on average 50% of the participants are under 30 years of age) through sectoral networks or agreements with the provinces or municipalities. The number of persons trained in 2019 was 89,196 (one-third of whom were under the age of 24) (Ministerio de Trabajo, Empleo y Seguridad Social, 2021). The certificates issued bear witness to the skills acquired but have no value within the education system.

Short VET with an educational focus and VET with a "demand" focus continue to operate side by side: two institutional registers, two consultation mechanisms with trade unions and businesses as key stakeholders, two institutional assessment systems and two funding sources and different values placed by the institutions on their own improvement plans. This highlights the lack of coordination between public stakeholders in the VET sector, as is the case elsewhere, such in as France (Recotillet & Verdier, 2016).

The Functions of VET

Interactions and Tensions from the Stakeholders' Point of View

Social stakeholders in the education and the employment sectors tend to question the ongoing tension and competition between the education focus and the work and employment focus. But both argue for their model which they each consider to be the true VET.

Officials from the Ministry of Education support training curricula based around "trade families" with credentials organised around longer, more formal training programmes. The heads of VET centres report that they often operate in marginal areas (e. g. they have an agreement with the Catholic Church) and focus on young people who drop out of secondary education and/or those with few resources with no access to tertiary education. They see their mission as more than just training. They highlight the work they do in a tutoring capacity and the need for open institutions where young people can come whenever they want (even after completing the training). In the absence of formal employment in their area, they encourage self-employment and the social economy. Thus, their discourse points to a role of social remediation while considering the broader impact of VET for social inclusion and the acquisition of life and job skills.

Businesses play a limited role as stakeholders in public VET, by taking part in some initiatives while developing their own training. Significantly, large companies (with a few exceptions) do not recognise the State as a partner in lifelong vocational training.

Unions played a significant role in developing training initiatives and in the recent expansion of VET centres. Some of the large unions have their own network of training centres,

including technical schools and even tertiary education institutions and a university. They want to develop an integrated training system and play a very important role in skills recognition, in some cases in association with business chambers. They get involved in pragmatic ways in initial and lifelong VET funded by both the Ministry of Education and the Ministry of Labour. They even promoted a model bridging VET and schools for young people and adults.

The Impact on the Integration of Young People

Some data show that VET has become relevant especially for young high school graduates. According to one assessment (Castillo et al., 2014), those who enrolled in trade-based VET were 2.6% more likely to access formal employment, provided they also obtained a high school diploma. Another study (Ferraris & Jacinto, 2018) shows that after taking a VET course, the risk of being unemployed decreases by 35%. In addition, young people who completed secondary education and took a VET course had a 44% chance of obtaining formal employment.

At the same time, qualitative studies on education-to-work transitions show that VET offers greater access to formal jobs to those who complete secondary education than to those with just a general secondary diploma (Jacinto, 2015).

Conclusions

From a continuum perspective (Carton & Mellet, 2021), VET has been shown to help young people transition to the job market by complementing secondary education and providing greater knowledge and more skills for employment. Recent public policies that plan to combine secondary education and VET contribute in this sense to job market integration. In the case of Argentina, trade unions involved in tripartite discussions have contributed to a systemic vision of initial and lifelong VET and even acted as pioneers by proposing forms of governance where VET is linked with the completion of secondary education and/or with higher education.

But discontinuities are still present and were accentuated by the COVID-19 crisis. Although a trend towards complementarity between formal education and VET can be observed, it is far from achieving a broader continuum that would give visibility to the role of VET in socioeconomic inclusion of young people and would establish closer linkages with the market for decent jobs.

Endnotes

1. Initial VET comprises two very different but parallel pathways: technical secondary education (duration 6 years, 13–18-year-olds) and VET per se.

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Hybrid Governance and Innovation in Education–Training–Work Continuums through Public-Private Partnerships

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Summary
Public–private partnerships (PPPs) grow in number and scope in the field of vocational education and training (VET) in response to skill mismatches. In countries with institutionalised social dialogue, a broadening in the hybrid governance of apprenticeships and the education–training–work continuum occurs. In countries with less institutionalised social dialogue, new PPPs represent innovation both in institutional and pedagogical terms.

Keywords
Hybrid Governance
Work-based Learning
Social Dialogue
Partnerships
Sustainable Development Goals

Hybrid Forms of Governance Can Support the Continuum

A typical outcome of social dialogue in vocational education and training (VET) are the agreements on forms of work-based learning, specifically apprenticeships, that facilitate a continuum upon conditions of good quality of teaching in schools and mentorship and experiential learning in the company. However, the current social dialogue crisis and ongoing public sector retrenchment have also affected skill production, leading to flexibilisation and generalisation of specific training programs (Ebbinghaus & Weishaupt, 2021). There are countries where these partnership structures are relatively recent in date, or are being reshaped following changes in the economic regime, for example, in the EU neighbourhood. We observe that new public–private partnership (PPP) initiatives in countries of established or emerging social dialogue in VET extend the traditional concept of apprenticeship schemes.

Next to social dialogue, digital advancement and internationalisation of VET are influencing public–private cooperation and the way apprenticeships are planned and implemented. For example, the ILO recommends fostering apprenticeships to ensure education to work transition, and the EU supports apprenticeships internationally through flagship initiatives such as the Youth Guarantee. Increasingly, financial resources and government approaches enable the emergence of new PPPs in VET.

Encouraged by these trends, apprenticeships and other forms of PPPs in VET are changing; thus, new empirical evidence is needed to monitor developments and assess their outcomes. The study of PPPs for skills development is a contribution in this direction, and this has been done through an overview of 23 case studies located in 10 countries with established social dialogue and four countries with recent or reshaped practice of public–private cooperation in VET. The study

was conducted on the eve of the COVID-19 crisis (European Training Foundation, 2020).

While Agenda 2030 for Sustainable Development promotes integration of policy objectives, the connections among the sustainable development goals (SDGs) seem insufficiently developed. Notably, the SDG4 on quality education for all and SDG8 on growth, employment and work are on parallel trajectories. Their alignment requires dedicated action on hybrid forms of governance. We find this perspective in the SDG17, with its targets on policy and institutional coherence and multi-stakeholder partnerships to leverage co-action of the different actors.

In our study, we looked at how partnerships in the VET system might support an education, training and work continuum. Specifically, we investigated under what conditions "effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships" (SDG target 17.17) would support a better integration of SDG4 and SDG8. The next sections present comparative elements of PPPs that are successful in the school to work transition, from among the 23 case-studies of PPPs in the skills field. The final section presents our conclusions.

School to Work Continuum

Relevant to our study is that representatives of companies, employees and vocational schools can engage in policy exchange relating to skills, knowledge and competency development. Within this perspective, apprenticeships are a particular form of cooperative effort of schools and companies to train a student on the job, where the apprentice works and contributes to the production process and is learning while working, associated with given days of theoretical instruction per week. This endeavour is leading to occupational credentials (see Wolter & Ryan, 2011). Apprentices are hired by private companies or public institutions in various sectors: construction, health care, hospitality, IT, manufacturing etc. In certain sectors in countries such as Austria, Germany, the Netherlands and Switzerland, apprentices have a specific work contract, determined in collective agreements.

Schematically, the student's transition along the education-training-work continuum varies when apprenticeships (internships, traineeships) occur, since the apprentice can routinise practical skills while learning the theory. In comparison with a regular student, an apprentice possesses practical experience and can show her capabilities. The information gap at the moment of recruitment and selection is thus reduced for both job seeker and the company.

The comparative evidence on apprentices and youth unemployment indicates that in countries with established work-based learning practices, unemployment is lower. The most recent Organization of Economic Cooperation and Development (OECD) employment figures illustrate that youth unemployment (those 15–24 years of age without work and actively searching for a job) is low in Germany, Israel, the Netherlands, Austria and Australia compared with countries where apprenticeships are less institutionalised.

In France, which is somewhat higher in the ranking of youth unemployment, it appears that the time it takes to get a job is less for students in apprenticeship, than for regular students. An important insight from the underlying French field experiment is that apprentices do not perform substantially better than vocational students, when they look for jobs outside the firm in which they trained. As Cahuc and Herverlin (2020) have argued, the positive effects of apprenticeship on youth employment is the result of retention of apprentices in their training firms. In other words, collaboration between schools and public employment services enabling more apprenticeships is supporting a continuum.

A pure case of "school-to-work" transition was the National Training Office for Oil-Related Trades (OOF) in Norway, which is an example of a private sectoral organisation coordinating two-year apprentices supported by state grants since 1998. Students work on the oil platforms and receive off-shore theoretical instruction, resulting in low drop-out and high employment rates for apprentices in the oil and gas companies. In Israel, we studied a VET network established by the federation of trade unions in 1928. The cooperative's revenue is derived from 80% public funding and 20% donations and profit, while employers contribute in kind. These entrepreneurial centres provide extracurricular and project-based learning for some 40,000 students to become business and social leaders.

New Dimensions of Partnerships

We have found novel dimensions of education-training-work continuum PPPs in countries with social dialogue. First, the Italian example shows how labour intelligence is enhanced by cooperative efforts of companies, national statistics and chambers of commerce. The statistical efforts lead to skills prediction and updated occupational profiles fit for future training programmes.

Second, PPPs can also be used for social integration. In Belgium, the Duo for a Job programme focuses on young immigrants' employment. This NGO-managed approach is sponsored by a Brussels employment agency and matches young immigrants with local retirees for mentoring and social capital. The PPP is implemented via a social impact bond (SIB): a payment-for-results financial scheme that leverages private social investment to pay for welfare services (impact investing).

Third, Western European countries show a broadening of established apprenticeship practices that are being transformed into modern training conditions. In France, the Campuses of Professions and Qualifications include a label awarded to regional networks of training bodies within an economic sector that bring together educational institutions, research laboratories and companies, which can act in synergy with competitiveness clusters. These initiatives address the skills needs of the whole sector, including SMEs. The Swedish Teknik College – a network of advanced training providers – was launched in 2004 in the engineering sector and is currently covering the whole industrial sector. It is offering certified training modules for companies at the secondary and post-secondary levels. Based on public and private funding, municipal and regional steering groups ensure all aspects of performance: skill intelligence, competency development and curriculum coherence. The German Institute for Vocational Training (BIBB) together with social partners is enhancing VET 4.0, a programme on the digital transformation in labour processes stressing occupational screening, skills forecasting and digital media competence of apprentices and trainers, aligning initial and continuous VET. In the Netherlands, some 160 PPP centres have been set up in VET and HPE schools since 2010, aiming to innovate and accelerate the mutual exchange between companies and VET and HPE schools. This initiative started in technical sectors and is now expanding to the economy at large.

Finally, we have also studied the development in Jordan, Kazakhstan, Serbia and Ukraine, countries where social partnership and work-based learning occur in a form or standard not comparable to countries with established apprenticeships. Nevertheless, new PPPs have been initiated in these countries, often supported by international organisations. In Serbia, an education-to-employment (E2E) project was initiated in 2016 to enhance the employment and labour market integration via competency development of youth, including vulnerable groups, with particular attention given to non-formal education, entrepreneurship and SME-development. The partnership is innovative for it includes the chamber, NGOs, companies and public employment service at the local level. More than 50 projects have been initiated covering over 100 companies and 1,500 youngsters, through a Swiss development cooperation investment of 13 million euros over eight years. Activities include individual and group career counselling, competence assessment, work-based learning and workshops in soft skills for job seekers, whereas employers benefit from analyses of occupations, recruitment, selection and matching of job-seekers and curriculum development of work-based learning. An employment success rate of 72% is claimed (E2E, 2022).

Conclusions

PPPs in VET are growing in number and activity across different geographical regions, with obvious differences within and between countries. Our first conclusion is that the traditional practices of work-based learning via PPPs in the field of vocational skills is expanding, driven mainly by quantitative and qualitative mismatch of skills supply and demand. The landscape of public–private cooperation in VET is changing both in countries of long-standing tradition of cooperation (France, Germany, Israel, the Netherlands, Norway, Sweden) and in countries where this practice is more recent or being reshaped (Italy, Serbia).

Second, different forms of apprenticeships and work-based learning are increasingly seen as an effective method to ensure the education-training-work continuum. This method, organised in cooperative hybrid forms of governance, is promoted by global agents, including the ILO and the EU. Our empirical evidence from the case studies suggests that the practice of PPP is transferred to new policy fields, such as social inclusion (in Belgium) and to green field sites (in Serbia). These PPPs represent innovative and hybrid forms of collaboration that only partially draw from pre-existing collaborative experiences and vary between contexts.

Third, against the background of a changing landscape in skills formation and labour markets, following the crisis of social dialogue in many Western European countries, the ongoing flexibilisation of production processes and generalisation of training programmes due to uncertain skills anticipation, the Agenda 2030 and SDGs offer a new lens through which to view PPPs as a tool to bring coherence between educational goals and growth and employment objectives, and highlight political and practitioner's action dilemmas.

The motivation for skill production is the key ingredient in partnerships that focus on apprenticeships, work-based learning and, more generally, on competency development. At the same time, concerns for youth employment and labour market integration are also included in the aims of these partnerships. When the forms and structures of cooperation are being established, mutual interaction among actors remains essentially dynamic. Hence, monitoring the nature and progress of the partnership is essential to the effort to regularly align the training programmes to the aspired learning outcomes. On this score, the empirical evidence raises some relevant future research questions about the trade-offs involved in accessibility, quality and funding of these partnerships vis-à-vis general education, and the coverage, learning outcomes and renewal of coordinated efforts in the transition from training to working.

Both the SDG framework and new empirical evidence are relevant to renew theoretical reflection about the education-training-work continuum and to evaluate the capabilities and knowledge needed to enhance an integrated approach.

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Part 3

Youth (Un)employment, NEETs and Education–Training–Work Continuums: Building Interactions between "Under-educated/-employed Targets" and Remediation Systems

NEETs in Africa: The Role of Core Skills and Active Labour Market Programmes

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Summary
This article presents the situation of young people not in education, employment or training (NEET) in Africa and the reasons for it. The NEET rate varies from country to country. However, it is higher for young women than for young men. Low levels of core skills and ineffective active labour market programmes (ALMPs) are key factors in explaining the high NEET rate.

Keywords
NEET
Core Skills
ALMPs
Africa

Introduction

Are the persistent discontinuities involved with education, training and work an obstacle to the adoption of an education–training–work continuum (or a Continuum) perspective in Africa?

Youth employment remains a major concern in developing countries in general and in Africa in particular. The transition from school to the labour market remains a complex issue that needs to be resolved in view of limited job creation opportunities. The Continuum, which aims to bridge the discontinuities involved with these three components, seems to be one of the most effective alternatives with the use of youth training programmes and active labour market programmes (ALMPs). Unfortunately, since their implementation in the 1980s and 1990s, the results do not seem to have met expectations.

Discontinuities in the Continuum remain significant. One of the main causes of discontinuity is the ever-increasing rate of young graduates, together with the rate of young people aged 15–24 who are not in education, employment or training (NEET). [1] According to ILOSTAT (2021), the NEET rate in Africa, estimated at 21.6% in 2010, reached 22.9% in 2020. This raises questions about the Continuum contribution in reducing the NEET rate; for example, What role have ALMPs effectively played?

This article is intended as a contribution to the topic and begins by analysing the historical concept of NEETs. Next, a critical analysis is made of the ineffectiveness of ALMPs implemented in one African country. Finally, lessons and perspectives are drawn from these analyses.

The History of NEETs: An Overview

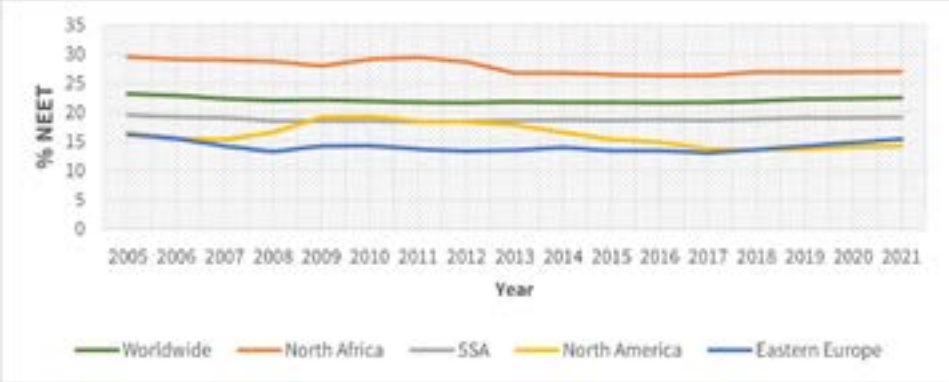
The NEET concept describes the situation of young people (aged 15–24) who are currently disengaged from both the

education system and the labour market. The term NEET, which emerged in the 1990s in the United Kingdom, was introduced as Status Zer0 and Status A in a particular social and political context (Williamson,1997). The primary target of this programme was school leavers aged 16–17 or those unable to qualify for unemployment benefits (Furlong, 2006). Over time, interest in this class of population grew in all regions of the world. Currently, the NEET concept has evolved markedly and become one of the key indicators for analysing the situation of young people in the labour market. For some, it is an indicator that helps rectify the lack of relevance or effectiveness of traditional indicators (Danner et al., 2020). This is because the criteria for some indicators, such as the unemployment rate, leave a large section of the population unaccounted for, even though it is unemployed.

Analysis of Changes in the NEET Rate

This section describes NEET rate changes around the world, focusing on a regional comparison.

Figure 3. NEET rate trends across the world and by region from 2005 to 2021



Source: ILOSTAT data (2021). SSA: Subsaharan Africa

As a general observation, the proportion of NEETs varied from one region to the next. Of all the regions considered, North Africa had the highest NEET rates over the entire period. Eastern Europe and North America had the lowest NEET rates in the working-age population. This could be explained by the relatively high level of core skills in these regions. In sub-Saharan Africa, the NEET rate declined over a long period (2005–2017), but efforts are still required to reduce it further. The NEET analysis by gender showed significant differences in sub-Saharan Africa. The NEET rate for young women was much higher. For example, in Côte D'Ivoire, 22.9% of young women aged 15 to 19 were in a NEET situation in 2019, compared with 10.9% of young men in the same age group (ILOSTAT, 2021). The same applied across the 20- to 24-year-old age group. This conclusion was based on a group of countries for which data were available. It should also be noted that overall, the younger age group (15–19) had a lower NEET rate than the group aged 20–24.

NEETs and education–training–work continuum : The Role of Core Skills

A low level of education has been identified in recent studies as one of the main factors likely to explain the growing number of young people in NEET situations (Giret & Jongbloed, 2021; Kramarz & Viarengo, 2015;)[1]. While in many African countries access to education (increase in the gross enrolment rate) seems within reach, statistics on student achievement remain concerning. In sub-Saharan Africa, many children complete primary school without reaching the minimum skill level required for reading and mathematics.

Table 2. Share of NEET among young people, by gender and age group in 2019

Pays	Age group			
	15–19		20–24	
	M	F	M	F
Côte D'Ivoire	10.9	22.9	13.0	39.9
Guinea	5.6	13.9	9.5	13.1
Kenya	9.1	13.2	23.7	38.4
Lesotho	21.5	30.3	36.2	55.4
Mauritius	16.4	15.4	13.7	26.1
Nigeria	19.3	24.1	34.5	39.8
Rwanda	23.7	28.7	31.4	44.7
Senegal	19.9	35.5	23.6	54.0
Seychelles	21.2	20.1	20.0	22.2
Somalia	33.5	39.5	43.1	63.7
South Africa	12.2	13.2	44.6	51.2
Zambia	17.1	23.5	35.7	48.5
Zimbabwe	16.4	28.2	32.5	47.6

Source: ILOSTAT data (2021).

Table 3. Changes in primary school completion rates and minimum reading and mathematics skills from 2000 to 2015

	% Completion rate			% Minimum reading level			% Minimum mathematics level		
Country	**2000**	**2015**	**Variation**	**2000***	**2015**	**Variation**	**2000**	**2015**	**Variation**
Benin	37.80	81.14	43.34	21.18	21.18	0	30.79	30.79	0
Botswana	93.73	69.21	–24.52	91.63	79.37	–12.26	75.41	80.00	4.59
Burkina F.	25.42	62.03	36.61	47.87	26.54	–21.33	64.68	35.95	–28.73
Burundi	24.92	66.42	41.50	-	45.41	-	-	59.97	-
Cameroon	50.58	76.22	25.64	72.66	65.59	–7.07	70.87	56.15	–14.72
Chad	22.19	37.95	15.76	22.36	-	-	33.21	-	-
Comoros	49.15	77.72	28.57	-	22.18	-	-	39.58	-
Congo	43.71	70.40	26.69	-	33.01	-	-	37.09	-
Côte D'Ivoire	43.22	62.13	18.91	63.69	22.62	–41.07	49.42	8.83	–0.59
Gabon	69.21	-	-	79.94	79.94	0	60.58	60.5	0
Kenya	87.61	101.48	13.87	95.38	88.20	–7.18	91.43	85.83	–5.6
Lesotho	63.18	76.11	12.93	75.70	82.50	6.8	40.91	87.04	46.13
Madagascar	36.70	68.65	31.95	45.01	14.90	–30.11	85.78	74.85	–10.93
Malawi	61.21	76.93	15.72	61.55	65.59	4.04	33.67	49.02	15.38
Mali	31.02	50.86	19.84	23.79	-	-	32.71	-	-
Maurice	102.79	100.48	–2.31	83.41	95.52	12.11	82.72	96.22	13.5
Mozambique	16.35	48.36	32.01	94.65	63.38	–31.27	90.15	48.15	–42.
Namibia	91.11	86.46	–4.65	62.60	100	37.40	28.30	100	71.62
Niger	18.38	64.75	46.37	14.40	-	-	25.13	-	-
Senegal	38.63	58.65	20.02	29.33	38.30	8.97	41.77	65.36	23.59
Seychelles	98.81	122.22	23.41	91.44	84.75	–6.69	80.60	84.02	3.42
South Africa	84.36	83.71	–0.65	72.77	75.06	2.29	52.97	68.77	15.8
Swaziland	61.58	80.58	19	98.74	98.28	–0.46	83.37	100	16.63
Tanzania	49.54	72.45	22.91	92.71	100	7.29	79.29	96.17	16.88
Togo	65.24	82.86	17.62	41.36	7.42	–33.94	54.15	23.42	–30.73
Uganda	59.79	54.88	–4.91	78.11	81.44	3.33	66.10	56.16	–9.94
Zambia	59.23	78.72	19.49	56.06	55.74	–0.32	36.05	29.21	–6.84
Zimbabwe	92.97	89.03	–3.94	90.98	75.73	–15.25	73.45	73.45	0

Source: Authors' calculations; *Data for 2000 were collected in 1999 in accordance with Altinok et al. (2016).

In the majority of countries, a significant increase in completion rates was noted between 2000 and 2015. Some countries achieved their goal of primary school enrolment in 2015. However, in terms of learning achievement, the proportion of students who gained the minimum skill level in reading and mathematics was still very low. In some countries, there has been a considerable decline in students' learning achievement. This is the case for countries such as Burkina Faso, Côte D'Ivoire, Togo and Zimbabwe.

Under these conditions, young people leaving the system lack basic skills and are increasingly at risk of becoming NEETs. Thus, to reduce the incidence of NEETs, quality education, starting on the lowest rungs of the school system, has to be provided. For this to be achieved, preventive strategies will need to be considered. One of them is the development of vocational and technical training units, where specific basic skills will be taught to ensure the economic empowerment of young people in a short period.

ALMPs: The Côte D'Ivoire Example

ALMPs refer to measures taken by governments to help individuals access the job market or prevent the loss of jobs for those already in the workforce. ALMPs encompass

various measures, ranging from training to job search assistance, subsidies, supported employment opportunities and programmes to support entrepreneurship. In Côte D'Ivoire, ALMPs have been initiated by the government since 1991 in order to address the many challenges linked to the dysfunctional labour market and youth employability. By implementing these programmes, the government confirms its role as a key player in the regulation of the labour market. A review of job creation initiatives implemented through projects/programmes of the Youth Employment Agency and the Employment Programs Coordination Office over the 2016–2020 period shows the total number of beneficiaries as 205,147. Three flagship projects came to fruition: the Youth Employment and Skills Development Project (PEJEDEC) with support from the World Bank, the C2D-Debt Reduction and Development Contract Project (Youth Employment) with funding from the French Development Agency (AFD) and the Agir pour les Jeunes (Taking Action for Young People) initiative.

However, despite the implementation of these ALMPs, the labour market for young people is observed to be increasingly insecure. This is evidenced by the workforce underutilisation indicator which is more than four times the unemployment rate for those aged 15–24 and three times the rate for those aged 25–34 (23.8% and 15.7%, respectively). This observation shows the urgent need for much greater State intervention. This situation partly challenges the relevance of ALMPs, indicating the need for better implementation, both in terms of content and intervention mechanisms (République de Côte d'Ivoire, 2021a). According to the National Strategy for professional integration and youth employment 2021, "inadequate operational capacities of youth integration and employment programs, shortcomings in the mechanisms used to monitor and assess the relevance of ALMPs, poor results in creating sustainable jobs with high socio-economic impact, insufficient state funds allocated to the implementation of youth integration and employment programs, and strong reliance on external funding are all weaknesses that explain the ineffectiveness of ALMPs". (République de Côte d'Ivoire, 2021b, p.16)

Key Lessons Learned for a Reduction in NEET Numbers in Africa

Although the NEET rate is declining slightly in some regions of the world, it remains very high in Africa. Low levels of core skills are one of the main reasons given for this high NEET rate. The ALMPs that are supposed to rectify the situation also have weaknesses that make them ineffective. First, the quality of education and/or training should be one of the priorities of the education systems. Furthermore, the implementation of systems for monitoring and evaluating ALMPs is crucial. In Côte D'Ivoire, impact assessments have been conducted for some projects and programmes intended to strengthen youth employability (e.g. the PEJEDEC, the C2D-Debt Reduction and Development Contract Project and initiatives with high workforce requirements (THIMO) as well as projects and programmes of the former Employment Studies and Job Promotion Agency (AGEPE). Yet, challenges remain unaddressed. The adoption of a law by both houses of Parliament (National Assembly and Senate) on the evaluation of public policies should help strengthen the effectiveness of public youth employment programmes to achieve a substantial reduction in the NEET rate in Côte D'Ivoire.

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Endnotes

1. The goal of every educational system is to provide children with core skills so they are more competitive on the labour market. When this goal is not met, as is the case in many African countries, school leavers are left without the basic skills needed to enter the labour market. They have neither the financial means for further training nor the core skills to compete on the job market or for entrepreneurship, and consequently find themselves in a NEET situation.

Breaking the Continuum of Socio-Economic Inequalities in Peru

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Summary
By documenting the links between different forms of vulnerable life trajectories and labor market outcomes, this article highlights the need to include precarious young workers among those targeted for labour market interventions. It also makes a case for such interventions to be tailored to the needs of different groups facing specific barriers to more secure working careers.

Keywords
Disadvantaged Youth
Informality
Labor Trajectories
Public Policies

Introduction

Recent studies have brought attention to the need, in studying disconnected youth, to focus on vulnerabilities rather than on absolute exclusion (i.e. “neither studying nor working” status, or ninis in Spanish) (Alcázar & Balarin, 2019). In fact, precarious youth employment conditions at a given point in time predict recurrent, if not permanent, vulnerabilities and deprivations. In effect, their fate is not necessarily better than that of the so called ninis. From family poverty, poor quality schools and lack of training opportunities to low productivity and permanently depressed wages there seems to be a continuum that presents a considerable challenge to policymakers. This continuum may be described as poor origins giving way to a career path in the informal labor market. Opportunities for training are scarce in such contexts, and often do not fit the needs of the most vulnerable, who may have care responsibilities or may need to remain in the informal labor market in order to meet their economic needs. Transitioning to the formal sector is thus very difficult and the more unlikely the longer youth moves along the informal path (Jaramillo & Escobar, 2022; Jaramillo & Tocre, 2022).

In this paper, we intend to summarize recent evidence on the trajectories of youth from underprivileged households in Peru along this continuum, identify the challenges they face once in the training and labor markets, and discuss policy options to improve their opportunities for adequate employment and, more broadly, social inclusion. Two potential channels exist through which policymakers can act: facilitating access to formal labor markets and providing flexible opportunities to receive pertinent quality training, which may enhance their productivity, self-esteem, and their chances for a way out of an informal labor market career path. However, labor market exclusion and vulnerability are complex phenomena that require policy interventions not limited to simply training and facilitating access to jobs. They need to address the effects of precarious living conditions, care needs, and other factors that may affect young people’s trajectories from a very young age.

The Setting: Family Poverty, Poor Quality Schools, to a Career Path in the Informal Labor Market

An overwhelming majority of programs seeking to improve young people's labour market entry appear to focus on developing skills, hard or soft, through various forms of training and active labor market policies that facilitate entry, sometimes including mentoring, follow-up, or employer subsidies (Chinen et al., 2017). While such programs appear to be effective, especially in low- and middle-income countries (LMICs) and for disadvantaged youth, they usually cater to the unemployed who are actively searching for jobs or who want to upskill (Kluve et al., 2017). This usually leaves out young people who, for various reasons, have disengaged from the labor market or who have entered it through precarious jobs that often lead to equally precarious work and life trajectories.

Following the focus developed for understanding current labor market vulnerabilities in high-income countries, attention in LMICs has been set on youth who are not in employment, education, or training (NEET). A strong consensus among researchers who have studied NEETs is that this fairly coarse grouping is composed of different subgroups with specific characteristics (Furlong, 2006) – from female NEETs who carry out unpaid domestic work and cannot enter the paid labor market because of care and domestic responsibilities, to young people with mental health conditions or disabilities whose needs go beyond the mere acquisition of skills. Recent arguments, however, have pointed to the importance of considering young people in precarious jobs as a particular subset of youth in vulnerable positions that may lead either to exclusion from the labor market or to the establishment of permanently precarious trajectories (Alcázar et al., 2017, 2019).

In effect, there seems to be a continuum that goes from growing up in a poor household, often in the context of poor neighborhoods, going through a deficient education system and entering the labor market through an informal job. Table 1 shows that an overwhelming majority of youth start their labor market careers in the informal sector. Further, chances of escaping this fate become more limited as one moves to less educated groups, a good proxy for socio-economic level. Formal/informal gaps are the main driver of inequality in working conditions among youth and elders as well.

Table 1. Informality rates among 15 to 29-year-olds by education level: Percentage in relation to reference population

	2019	2020	2021
Informal	78.6	81.4	83.2
Education level			
Primary	95.9	96.0	96.1
Secondary	87.9	90.9	90.6
Higher	64.6	67.1	70.8

Source: Encuesta Nacional de Hogares (INEI) (2019–2021).

The cost of entering the labor market through precarious informal jobs is high. Youth in informal jobs earn only 60% of the average wage of those in the formal sector, and the OECD (2018) estimated that the probability of falling below a low wage threshold was six times higher among youth in the informal sector. Since social benefits are tied to formal employment, youth in informal jobs have no access to social protection either, and their chances of landing a better job are also much lower than those of their peers in the formal sector.

Crucially, in terms of the labor market path, as one of us showed in a recent paper, the chance that an informal wage earner will receive on-the-job training is 20% lower than that of their peers in formal jobs (Jaramillo & Escobar, 2022). This is one key factor behind the observation that early employment conditions predict the quality of future employment. Even if chances of landing a formal job are greater as labor market experience increases – that is, it is more likely that an individual from 25 to 29 years old will get a formal job than one who is from 21 to 25 – those that started with a better job will have better employment conditions in the future.

With the cost of informality for young people being so high, it is important to understand the trajectories and conditions that lead to such positions, especially when designing policies to address the needs of this group.

In a recent study on the life trajectories of NEETs and precarious youth using panel data as well as qualitative life histories (Alcázar et al., 2017, 2019), we found that young people's current positions were the result of different configurations of life events and shocks, that could lead to the same positions being more vulnerable and eventually more permanent in some cases than others. Those young people who had experienced a greater intensity of shocks (e.g. violence, a carer's death, and unemployment or health issue leading to loss of income or trauma), from a younger age, also tended to establish more vulnerable trajectories, often associated with early school drop-out and an early entry into precarious employment. This group's employment trajectories presented much greater challenges than those of a less vulnerable but also precariously employed group of young people for whom skills training and active labor market policies may be more suited. In the former group, compensatory, or remedial strategies may be required in addition to formal training.

Another key factor when explaining why some young people embark on precarious job trajectories is the complex transition from school to post-school life. In many cases, this happens after an early drop-out, but even those who complete their schooling often face higher education markets that are often private and costly, and which do not offer adequate

opportunities for technical education. Improving the supply of further education opportunities and facilitating access to them is therefore a key area on which policies should focus.

Which Policy Responses? Beyond Training and Facilitating Entry to Formal Labor Markets

Evidence supports the idea of interventions in the early labor market experiences of youth, particularly those oriented to securing them a formal job. Two elements seem key along these lines. One has to do with securing pertinent and quality training in a flexible manner that considers the needs and restrictions of specific sub-groups, such as youth who already have family obligations, particularly women in care roles, but also men who need an income in order to provide for their families. Interventions with modular designs seem the most adequate for these purposes, as they allow for progress within a flexible calendar that enable young people to combine learning with earning or caring. This implies that the education–training–work continuum does not have to consist of a series of discrete stages, but might need to accommodate the often inevitable overlap of work, training, caring, and earning.

Mixing on-line content with face-to-face instruction, while taking advantage of what has been learned in recent years about effective use of technology, seems to hold better chances of fitting into the different needs of disadvantaged youth. In the case of women, research has shown that interventions with a strong gender focus might be most successful (Chinen et al., 2017). On the other hand, effective connection between disadvantaged youth and formal sector firms is much needed. This includes specific instruction on how to face the selection process and what is expected from a position in a formal firm. But, mostly, engagement between public employment services and formal firms is needed so as to be able to communicate the value proposition of access to a larger pool of workers. Evidence also suggests that follow-up strategies with beneficiaries are important, as the positive effects of some programs appear to wither in time once the programs end.

In the case of the most vulnerable youth groups, an exclusive focus on skills and strategies for accessing and maintaining jobs may be insufficient. The weight of personal and family histories of disadvantage means that such training needs to be supplemented with other, usually more costly, strategies, that may include wage subsidies, remedial education, mentoring, and counselling, including in areas such as family planning and personal financial management. Increasing evidence about the effects of neighborhood deprivation on youth educational and labor market trajectories (Lépore and Simca, 2018) also suggests that interventions may need to consider appropriate outreach strategies, localized delivery, and collaboration with families as well as interagency work (National Research Council, 1993). While costly, the long-term economic and wellbeing rewards should outweigh the investment.

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How Young People Combine Education and Work: An Under-Explored Phenomenon

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Summary
This paper challenges the narrative of the linear "school-to-work transition", drawing on over 20 years of research by the author and colleagues into school and university student part-time working. It is now routine for young people to work for several years while in secondary school. Yet, much policy discourse and much career advice ignores this fact. Policy implications and the need for further research are discussed.

Keywords
Student Working
Part-time Work
Careers
"School-to-work" Transition

Introduction

While the vast majority of Australian workers now enter the workforce initially through part-time work while studying, their part-time jobs have not been properly recognised as of importance except as a preparation for what is seen as "real" working life (i.e. that which commences once full-time study ceases). This is because it is generally held that education is the main "business" of youth. But it also reflects a lack of acceptance of the worth of both part-time jobs, vis- à-vis full-time work, and service sector jobs, which are often depicted as low-skilled. Thus, more general changes in work, the labour market and the economy have relevance, including:

1. Changes in the world of work which give rise to the need to prepare individuals with the necessary skills for multiple job/career transitions,

2. Policy changes in relation to facilitating the post-school transition and

3. The shift in the economy from primary and secondary to tertiary industries.

Student-working careers thus represent the major route for workforce entry in the twenty-first century, and also bring together and exemplify some major trends in the economy.

This paper uses research data, drawn from seven studies led by the author to develop principles for policy development. While the research is all Australian-based, it will have direct applicability in other similar countries, and the principles may be adapted for a wider range of countries, although more data are needed on young people's working while at school across the globe.

Background

While it is not disputed that working while at school is common, the topic is not well researched. The response of the scholarly community has been mixed. Some literature views the jobs that young people undertake part-time as menial, and their employers as exploitative (Tannock, 2001).

Other literature is more balanced (e.g. Bailey & Bernhardt, 1997). Much of the response seems to be affected by attitudes of some scholars towards the industries in which students work, many feeling that the service industries lack prestige and are "low-skilled" (Huddlestone, 2011). These jobs are not well respected (Duemmler & Caprani, 2017), partly due to low pay and conditions; yet, the "unsocial" hours suit young people at school, and the low pay (due to the age of the workers) enables more young people to be employed. Smith and Teicher (2017) have extended social construction theory about skill in work to argue that the large numbers of teenagers in this type of work add to its low status, in a self-reinforcing process. Other literature seems to assume that since the student-workers are generally employed casually, they will naturally not be treated properly nor given opportunities to advance (e.g. Bailey & Bernhardt,1997).

Some literature on part-time student-working focuses on the effects upon education (Robinson 1999). Generally, no adverse effects have been found for moderate working while at school, with steady working being a reliable predictor of post-school education attainment, particularly the attainment of a college degree (Staff & Mortimer, 2007). Some authors worry about the effects, and while it would be impossible to "turn back the clock" to a time when young people did not work while studying, it is a concern worthy of consideration. Much scholarly, governmental and international agency literature continues to refer to the "school-to-work transition", ignoring the fact of student-working.

Method

The paper provides an overview of seven research projects on this topic led by the author. Six were undertaken in the 2000s and the seventh at the end of the 2010s. Publications from the projects are listed below.

1. Smith, E. (2000). Young people's learning about work in their first year of full-time work [Doctoral thesis, University of Technology, Sydney].

2. Smith, E. & Green, A. (2001). *School students'* learning from their paid and unpaid work. Adelaide: National Centre for Vocational Education Research (NCVER).

3. Smith, E. & Wilson, L. (2002). *Learning and training in school-based new apprenticeships.* Adelaide: NCVER.

4. Smith, E. & Comyn, P. (2003). *The development of employability skills in novice workers through employment.* Adelaide: NCVER.

5. Smith, E. & Green, A. (2005). *How workplace experiences while at school affect career pathways.* Adelaide: NCVER.

6. Smith, E. & Patton, W. (2009) Part-time working by school students: Workplace problems and challenges. *Youth Studies Australia*, 28(30), 21–31.

7. Smith, E. & Foley, A. (2021, July 1–2). *Preparation for post-school careers in rural and peri-urban Australia: Connections with employers and labour markets.* Employer Engagement: Preparing Young People for the Future Conference PowerPoint Presentation (educationandemployers.org).

The research used a variety of methods: large surveys of young school students, focus groups of school students, case studies in companies, including manager and worker interviews, expert interviews with government and industry stakeholders, and interviews with community stakeholders. Three included longitudinal components, tracking young people over two or three years.

Findings

Findings from the 2000s

Typically, school students worked in retail and fast food/cafes, which accounted, for example, for two-thirds of the jobs held by students in Study 3. Often, they enjoyed these jobs so much that they chose to stay with their employing company when they left school or university, even though their original career goals had been different. Employers of part-time student labour often set out to encourage their better student-workers to stay with them, offering incentives, such as transfers among towns, university scholarships and promotion opportunities, in order to retain them. Increasingly over the decade, managers reported in interviews that they themselves had advanced into their current positions from the part-time jobs that they had while they were students. Also, some employers enrolled some of their student-workers in qualification-based training programmes as part of their employment.

The survey in Study 6 tracked students from school Year 10 (T1) to Year 12 (T3). At T1, over 70% of respondents said that they had participated in paid part-time work since they started at secondary school, and by T3, 100% had done so. Only small proportions of students had more than one job (3.5% at T1 and 7.0% at T3.) The average working week was constant, ranging from 5–10 hours. Study 6 examined many workplace issues for the young people, and ways in which companies addressed them, via company case studies.

Findings from the late 2010s

Study 7 focused on young people's thinking about their futures after school, but also included discussions about their part-time work. This study showed that young people relied heavily on their part-time jobs to enable them to complete school and to undertake tertiary studies, as well as to increase their families' income. Young people from

disadvantaged backgrounds and indigenous young people found it harder to obtain employment and were sometimes assisted by their schools, but the awareness of school staff about the working habits of their students varied greatly. Two years after leaving school, some young people continued in the same jobs they had at schools, or with the same companies, either part-time while they studied or in a full-time capacity. Others stayed in the same industry but with different employers.

A surprising finding was the number of hours that the young people were working while at school. Some worked over 20 hours a week, and a substantial proportion had two jobs. This is a large increase from the previous decade (Studies 1 to 6). It is clear that this increase is a phenomenon which needs to be investigated through large-scale research.

Implications

The research reported here indicates the strategic importance of student labour to employers and to industries, its popularity with young people and sometimes its vital contribution to family incomes. Student working will continue to be an enduring feature of the twenty-first century labour market, regardless of the presence or absence of policy interventions.

What are the possible policy issues associated with student-working? The data gained from this range of projects and the research literature suggest three principles that could underpin a policy agenda. They are:

(1) To ensure that students who work are treated fairly by employers and by their schools so that they are not exploited, and so that they can give due attention to both sets of responsibilities,

(2) That the learning gained from part-time work is seen as important, can be articulated by all stakeholders and may possibly be accredited in education courses in some way and

(3) That due attention is paid to equity issues so that neither those who work, nor those who do not work, while at school are unduly advantaged and that those with jobs providing rich experience are not unduly advantaged compared with those in jobs that are relatively impoverished in the experiences available.

Flowing from these principles, some possible policy initiatives are listed below.

Relating to Principle 1:

- Greater government regulation of working hours for student-workers,
- The right for student-workers to time off for specified school-related activities,
- A referral service for under-18 student-workers needing advice about employment difficulties and
- Timetabling flexibility at schools within reasonable bounds.

Relating to Principle 2:

- Encouragement for qualification-based training as part of student-working and
- Consideration of standard forms of recognition in school-leaving certificates, for learning from part-time work.

Relating to Principle 3:

- “Compensation” programmes organised through schools for those students unable to access part-time work (e.g. due to social class, geographical disadvantage or individual differences). Such programmes could provide the experiences and skills development more usually gained through part-time work, and/or provide negotiation into actual paid work.

Relating to two or more principles:

- Pre-education at school about rights and responsibilities of part-time working at ages 13 or 14 before formal student-working life (at least in Australia) begins,
- Structured dialogue about student part-time working between schools and employers at local levels and
- Structured dialogue about student part-time working among schools, employers and unions at state and national levels.

These principles, developed from Australian research evidence, may transfer quite readily to other developed countries. Some of them are already being enacted by schools or employers, or in specific geographical locations, but should be more systematised. However, there is a danger that employers could be discouraged from employing students if any regulatory framework was perceived as being too rigid, or that school students could resent perceived governmental interference in their working lives.

Conclusions

The changes in youth labour markets that have taken place have been radical and deep, and the significance extends well beyond what happens to individual young people during their years of study. Even since the turn of the twenty-first century, the research shows that the amount and breadth of work undertaken by school students appears to have increased quite significantly. The "school-to-work transition" no longer exists in some countries. Almost all young people in these countries, while still at school, are engaged simultaneously in education and work, while their employment may have associated formal training as well, thus involving the young people in all parts of the education–training –work continuum.

COVID has had deep effects which may affect these long-term trends. COVID disproportionately affected the industries in which young people are employed (Schoon & Mann, 2020). Some worksites kept operating, albeit in different ways and under difficult circumstances, but some worksites closed.

It is acknowledged that further complexities apply in countries where the concept and practice of child labour is problematic, and this matter underlines the need for more global data on the topic.

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How the Second Chance School Helps Prevent School Dropouts from Becoming NEETs

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Summary

The increasing young people not in education, employment or training (NEET) rate is due, in large part, to early school dropouts. Second Chance School (Ecole de la 2ème chance) is a solution designed to prevent school dropouts, thereby helping improve the NEET indicator. Tunisia's recent experience with Second Chance School is presented here and discussed by the author.

Keywords

NEETs
School Disengagement and Dropout
Job Market Integration
Youth Unemployment
Second Chance School

Introduction

The issue of school dropouts affects many education systems around the world. Students who drop out of school often add to the number of young people not in education, employment or training (NEET). According to the International Labour Organization (ILO) statistics, the age range for the young people concerned, both male and female, is 14–25 years old inclusive (ILOSTAT, 2022). The NEET rate is the indicator commonly used to identify the extent of this issue (see Table 1 below.) The issue is also one of the problems addressed in the United Nations' Sustainable Development Goals (SDGs) and included in Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Data on NEETs

International research on NEET data faces at least two challenges: the reliability and the consistency of the data regarding some countries, particularly low-income and lower-middle-income countries. ILO estimates from "Global ILO modelled estimates for the NEET" (ILO, 2022) provide aggregate rates by region for 2020.

Table 1. NEET rate for youth by region

	NEET rate in %		
Region	**Total**	**Male**	**Female**
Worldwide	23.3	15.7	31.5
Arab States	35.6	21.0	51.4
Central and Western Asia	24.4	19.1	29.9
East Asia	17.6	13.6	22.2
Eastern Europe	13.0	11.4	14.7
Latin America and the Caribbean	24.0	17.6	30.5
North Africa	29.1	19.6	39.0
North America	14.3	14.1	14.4
Northern, Southern and Western Europe	11.4	11.8	11.0

Source: NEET data by region (ILO, 2022).

This table shows the differences in country groupings, which can be put in three categories:

- Total rate less than or equal to 17.6% in the following regions: Northern, Eastern and Southern Europe, North America, Eastern Europe and East Asia,
- Rates around 24% in countries of Latin America and the Caribbean and in Central and Western Asia and
- Rates over 29.1% in North Africa and Arab States.

The second point to note is the gender gap. Apart from European and North American countries, the gaps are indeed very significant, particularly in North Africa and the Arab States.

Causes for Increased NEET Rates

There are several causes for the high rates observed in many countries. The low performance of the education system is the main factor. This is reflected, in particular, in the relatively low proportion of young people who successfully complete their schooling (award of a credential). Other factors play an important role, such as personal and family background and, of course, the social context with its various components.

Viewed from another angle, the NEET rate is a sign of the discontinuity between the various education–training subsystems and their linkages to the job market. The higher the NEET rate, the greater the discontinuity, which indicates a missing or weak education–training–work continuum.

Second Chance Schools in Existence for over 25 Years

Created in France in 1997 (Patriat & Requier, 2015), the first Second Chance School was designed around the principles contained in the White Paper entitled "Teaching and Learning: Towards the Learning Society", adopted by the European Commission in 1995. Since 1997, many Second Chance Schools have been created in numerous countries in Europe. The training duration is variable. According to Article L214-14 of the French Code of Education, "schools of the Second Chance are part of the regional public service for vocational training and they offer training to people between the ages of sixteen and twenty-five who have no vocational qualification or credential".

In Quebec, the same concept is known as raccrochage (Merri & Numa-Bocage, 2019). Quebec authorities want to ensure that "general adult education will henceforth refer to a return-to-school system, the role of which is to provide minimum qualifications to young people who left secondary education before receiving a credential" (Marcotte et al., 2015, p.13).

Second Chance Schools in Tunisia

With UNICEF's support, the Ministry of Education, the Ministry of Vocational Training and Employment and the Ministry of Social Affairs opened the first Second Chance School in Tunis in 2021.

It is often claimed that approximately 100,000 youth leave school each year without graduating or completing their secondary education. According to a quantitative and qualitative evaluation carried out by Cayambe Education (Cayambe, 2018) to gauge user awareness and the effectiveness of a campaign carried out in October 2016 by the Ministry of Education and UNICEF entitled "L'école récupère ses enfants" (School brings back its children), it is estimated that the annual number of children leaving school without a solution (neither employment nor vocational training) is actually around 27,500. In fact, the survey shows that many of those who leave public education enrol in private schools or in various vocational courses, while others enter the formal and informal labour market. A study conducted by the Tunisian Forum for Economic and Social Rights - Monastir Branch (2014) in three of the country's Governorates shows that:

- The dropout rate is higher for boys than for girls (2/3 to 1/3, respectively),
- The age ranges of the dropouts can be divided as follows: 16.93% for those over the age of 17, 24.07% for those aged 16–17 and 37.90% for those under 16,
- 64.31% of school dropouts did not complete the preparatory level and 32.32% have secondary schooling and
- In all three governorates, these young dropouts come from poor or very poor families.

The overall education–vocational training structure gives young school dropouts aged 16 and over the opportunity to undertake a vocational course matched to their academic achievement. Enrolment is not subject to conditions regarding the year they dropped out. Even those who left early before completing primary education can gain access to one of the forms of apprenticeships and qualify in certain trades. However, those who leave school before the age of 15 are not eligible for any vocational training programme leading to one of the credentials recognised under the Tunisian National Qualifications Framework (NQF). Unfortunately, the provisions of Article 13 of Law No. 2008-10 on vocational training regarding the creation of a preparatory course for these young people have never been implemented.

It must be pointed out that the Tunisian system is characterised by a weakness or even a breakdown in the continuum between education and training. There is no

career guidance system to manage the transitions between the education system and vocational education and training (VET) systems. A young school leaver is not given any guidance in considering vocational training. They may or may not choose to enrol voluntarily.

In considering this situation, the ILO study conducted in 2016–2017 (Toumi, 2017) on strengthening social inclusion within the vocational training system concluded that the creation of a system to support young people from 12–16 years of age would be appropriate.

The solution put forward by its proponents includes the implementation of the following (Cayambe, 2018):

- A "one-stop-shop", open to all children aged 12 to 18 with no future solution and

- A permanent Second Chance-type remediation programme, operating as a mass device. It is designed to offer a "second chance", different from the first one, to students who did not complete their schooling because of specific individual difficulties (family, social, cultural etc.).

The first Second Chance School was launched on April 6, 2021, in the very centre of Tunis. Two more are scheduled for the future.

Lessons Learned and Conclusion

The Tunisian experience is still in the implementation stage. As such, it cannot be evaluated. But some observations can be made:

- The initiative is timely. It shows that the authorities are serious about the problem of school dropouts and the impact on thousands of young people,

- The collaboration among three ministries – education, vocational training and employment, and social affairs – shows a departure from the approach which prevailed for several decades, where the ministries in charge of education and vocational training kept shifting the responsibility for dealing with young school dropouts to each other. This joint work also highlights the desire to aim for a situation where education, training and job market access make up a single continuum, with bridging points providing access to differentiated pathways, all converging towards gaining decent work,

- The willingness to put the young person at the centre of the action by aiming to mobilise the resources necessary to help build a future with the family's involvement is relevant and can achieve success and

- The creation of a "one-stop-shop" to inform and provide guidance and support would, if properly carried out, will improve the assistance given to school dropouts.

In Tunisia, a better apprenticeship system – without the award of a credential – could take in a significant number of young people. The implementation of the recommendations in the Strategic Note on Apprenticeship prepared by the Ministry of Employment and Vocational Training with ILO support (ILO-Tunisia, 2021) could turn this integration programme into a true job access program for thousands of NEETs each year.

Despite these positive points, Second Chance School is not a miracle solution; yet it remains a way of reducing the number of NEETs. Other support programmes are available for this population and can provide quick, inexpensive and mass solutions for integrating thousands of NEETs, especially in developing countries. This includes informal and non-formal training approaches which need to be better supervised and can achieve good results in a very short time.

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Part 4

Education–Training–Work Continuums and Professional Experience: The Proof of the Pudding is in the Eating

Technological Innovation and Training: How to Avoid Discontinuities

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Summary
One of the causes of discontinuity in the education–training–work continuum is the mismatch between the skills acquired through vocational and technical training and the labour market. As technological changes accelerate, their impact on skills needs to be anticipated during the research and development (R&D) phase so that teaching curricula are updated and remain aligned with the requirements of the job market.

Keywords
Technology
Innovation
Training
Profession
Skills

The Swiss Context

Vocational training is governed by a national law on vocational training. Each trade is described in an edict reviewed every five years and revised every ten years in order to reduce discontinuities between training and work. The revision of an edict can take more than a decade from the preliminary work to the award of the first credentials. The current inertia in the training system translates into a lack of flexibility in continuously adapting trade occupations to the socio-economic contexts.

Technological Innovation

Currently, one of the responses to urgent climate concerns is the energy transition. In this context, green hydrogen as an energy source provides an exceptional opportunity, especially for heavy transport (road, rail, boats, planes) (World Economic Forum, 2022).

A Private Initiative: The Generation of Hydrogen (GoH!) Project

The objective of the project presented below is to develop a hydrogen industry sector that is entirely Swiss as well as a 40-ton truck running on a hydrogen powertrain.

The project was initiated by four Swiss economic actors with the support of a private foundation, the Nomads Foundation, whose goal is to contribute to the development of a sustainable and inclusive society and to accelerate the delivery of sustainable development goals.

The Foundation partnered with a start-up that designs and develops high power density electric-hydrogen powertrains, particularly for the transport sector. The project partners are: Green GT (www.greengt.com), a specialist in commercial vehicles (Larag), a producer of hydrogen by electrolysis from renewable (green) energy, Services Industriels de Genève (SIG) and a large retail chain (Migros Geneva) which has its own network of service stations and a fleet of trucks operating on a daily basis between distribution hubs and points of sale.

Unlike other industrial projects, this is a co-creation between the stakeholders involved in the entire value chain (production, storage, distribution and hydrogen use). This provides a more comprehensive approach than the standard research and development (R&D) processes usually found in specialist truck manufacturers, for example.

Bringing Together the Technological R&D Process and the Educational Process

From a training point of view, this project represents a real systemic innovation because it includes an educational component in its design phase. Moreover, this approach focuses on initial and lifelong vocational training, whereas tertiary technical training concentrates mainly on engineering and is often closely linked to research work.

The objective is to reduce potential discontinuities in the continuum between training and work; however, making changes to the Swiss dual training system (see Context) is a complex exercise, since the system relies on the connections among the training partners. Therefore, any change will encounter significant inertia. Given the structural economic changes our society has to face, the inclusion of technologies within the updated edict for the trade occupation needs to be anticipated. As a first step, for efficiency reasons, the plan is to launch courses as part of lifelong vocational training, the content of which can be added later to the initial training edicts.

Mapping the New Skills

In order to prepare for the rapid changes occurring in a labour market in full transition and to improve everyone's employability, the challenge is to anticipate the "customised" courses as well as the reskilling and upskilling needed to create jobs in promising business sectors.

The analysis of the actions of the staff involved in this project serves as a demonstration of applied skills forecasting and management (Streuli, 2021). Commissioned by the Nomads Foundation, the Centre for the Development of Occupations of the Swiss Federal University for Vocational Education and Training (SFUVET) is developing a skills map based on the field analysis of employees at work on the GoH! Demonstrator truck. The analysis of the gap between their initial skills and experience – and the new skills needed to work on the demonstrator truck – helps forecast the changes in the jobs impacted by the development of hydrogen, and consequently, the changes required in the training structures.

A Cross-Functional and Systemic Approach

The analysis covers the entire value chain of hydrogen used for transport, from production to operation, distribution and use in motion. The analysis started with the part related to the hydrogen truck (GreenGT and Larag). The skills needed to maintain the truck have an impact on mechanical and transport jobs, but also on those linked to energy production, certification services or emergency services, for example. This approach leads us to believe that the process of developing jobs "in silos", namely by trade or by field, needs to change and become more cross-functional, which will require more cooperation among the sectors in order to meet the innovation and energy transition challenges. Training–work discontinuities should thereby be reduced, if not eliminated.

Current Status of the Project

The 40-ton truck was officially launched – a world first for a 40-ton truck – during the European Energy Transition Conference, held in Geneva from 30 May to 2 June 2022.

The energy producer, SIG, has also made progress in research and the possibilities of installing an electrolyser to produce green hydrogen: a pilot installation will soon be ready. Progress has also been made on the service station, and it is expected that operations will commence in the first half of 2023.

Training Component

The challenge is to offer "customised" training enabling the acquisition and update of skills (*upskilling/reskilling*) in response to the rapidly changing labour market, while creating meaningful jobs to attract the younger generation to these occupations (green jobs).

The "skills development" component of the project has two focus areas:

1. Identifying skills requirements and anticipating the impact of hydrogen on vocational training and lifelong education.

2. Implementing a system for monitoring and modelling rapid skills adaptation for other sectors where rapid change is affecting the labour market and the demand for skilled employees.

Based on a series of workshops analysing the activities of GoH! partner companies, which began in late 2020, a skills map will be created to clarify the coverage of existing courses and the changes needed to ensure that trades related to road transport match business needs.

The challenge will then be to develop lifelong training for the entire value chain (production, transport, hydrogen supply and truck maintenance).

Nomads Foundation also works with relevant local and umbrella occupational associations, such as the Union des professionnels de l'automobile (Union of Automobile Professionals [UPSA-GE]), Association suisse des installateurs électriques (Swiss Association of Electrical Installers [EIT.swiss]) and Union suisse des arts et métiers (Swiss Union of Arts and Crafts [USAM]).

The project will thus help to achieve the following:

- Identify the skills required for the hydrogen-powered transport industry to increase workers' employability and provide businesses with a qualified workforce.
- Reduce the time required to create, develop and revise the training courses for each technological development.
- Reduce labour shortages through the implementation of appropriate training.
- Facilitate reskilling towards green jobs for the workers whose jobs are at stake.

Finally, this project will help model an approach that can be duplicated for other technological innovations.

Conclusion

Vocational and lifelong training must seize innovations in order to identify their impact on knowledge and skills transfer early enough. A forward-thinking outlook should be adopted so that the workforce remains qualified and efficient, and businesses are not faced with staff shortages and a loss of competitiveness, thus helping reduce training–work discontinuities.

Anticipating innovations is unfortunately not the "Holy Grail" to eliminate these discontinuities. The time needed to implement the edicts and improve the national system of vocational training also needs to be shortened.

Vocational training is organised around standardised work methods dating back to the previous industrial revolution and structured by each trade association around its own specialisation. Current changes (technological, climatic, demographic) are disrupting entire sectors of our economy and bringing in cross-functional transformations that will force professional associations to reorganise.

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The Paradox of Planning and Implementation of South Africa's 2030 Human Resources for Health Strategy

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Summary

In South Africa, as elsewhere, the COVID-19 pandemic has underscored the criticality of human resources for health (HRH), while exposing the fault lines of under-investment and insufficient prioritisation of HRH. Notwithstanding the Government's adoption of the 2030 HRH Strategy in 2020, implementation remains non-existent. The lessons for implementation include capable HRH technical leadership, the development of institutionalised capacity, and advocacy.

Keywords

Human Resources
Health Workforce
Planning
Implementation
South Africa

Introduction

Competent, productive and well-motivated human resources for health (HRH) are a prerequisite for universal health coverage (UHC). The COVID-19 pandemic exposed and amplified the global HRH crisis and underscored its contribution to weak, vulnerable health systems (Haldane et al., 2021).

South Africa, with a 2022 estimated population of 60.1 million is a constitutional democracy, with health a concurrent responsibility of both national and provincial government (Republic of South Africa, 1996). The history and context of HRH in South Africa cannot be reviewed in isolation from the legacy of apartheid that bequeathed a fragmented, racially segregated health system, and widespread political, social, and economic inequalities (The Presidency, 2019). These inequalities have implications for HRH and for the discourse on a high-quality health system (The Presidency, 2019).

In this commentary, we focus on the paradox of planning and implementation of South Africa's 2030 HRH Strategy, based on our experience of leading the development of the Strategy. In the first section, we present the policy context and brief background on HRH in the country, followed by the key recommendations of the Strategy. In the concluding section, we highlight the problems of implementation and conclude with lessons to enhance implementation.

Policy Context

The 1997 White Paper for the Transformation of the Health System in South Africa was one of the first democratic government policy documents that outlined a policy position on HRH (Department of Health, 1997). The policy intentions on HRH were revolutionary in many respects, predating the global emphasis on HRH by almost a decade (Box 1).

Box 1. Synopsis of post-apartheid policy intentions on human resources for health

Recognition of:

- Contribution of HRH to health and social development.
- Relationship between meeting population health needs and recruitment, selection and placement of HRH.
- Importance of equity, redress and the national imperative for HRH to reflect the demographic profile of South Africa.
- Links between design and content of health professional education programmes, HRH competencies and their geographical distribution.
- Importance of competent and caring health workers working in multidisciplinary teams.
- Criticality of creating or promoting "a new culture of health sector management".

Source: Adapted from Chapter 4 of the White Paper for the Transformation of the Health System, (Department of Health, 1997).

In the period since South Africa's democracy in 1994, HRH developments have also been influenced by other transformative laws and policies.

South Africa's HRH Crisis

South Africa has higher national health worker densities than most other African countries, as well as strong legal frameworks and cyclical national-level HRH strategic plans (National Department of Health [NDoH], 2020). However, the country continues to face staff shortages, inequities in the distribution of HRH between urban and rural areas and between the public and private health sectors and sub-optimal performance and management of its health workforce (van Rensburg, 2014). This is exacerbated by the absence of consolidated national health workforce data, inclusive of both the public and private health sectors (NDoH, 2020).

Similar to the global situation, the COVID-19 pandemic has both underscored the criticality of HRH and exposed the crisis of staff shortages, maldistribution and poor management and governance of HRH in South Africa (Rispel et al., 2021).

Key Recommendations of 2030 HRH Strategy

In March 2019, the then Minister of Health appointed a Ministerial Task Team (MTT) to support the NDoH with the development of a HRH Strategy for 2030 (NDoH, 2020). Guided by South Africa's rights-based Constitution (Republic of South Africa, 1996), and the vision in various policy documents, the MTT used a labour market conceptual framework and participatory methodological approach for the development of the 2030 HRH Strategy.

The final 2030 HRH Strategy underscores the need for additional investments in HRH to improve health service quality, equity and access in South Africa. The vision and goals of the Strategy are shown in Box 2.

Box 2. Vision and goals of the 2030 HRH strategy

1. The vision of the HRH Strategy is that South Africa invests in the health workforce to ensure quality universal health coverage and a long and healthy life for all people.

2. In order to achieve the vision, there are five strategic goals listed below.

   Goal 1: Effective health workforce planning to ensure HRH aligned with current and future needs.

   Goal 2: Institutionalise data-driven and research-informed health workforce policy, planning, management, and investment.

   Goal 3: Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system.

   Goal 4: Ensure optimal governance; build capable and accountable strategic leadership and management in the health system.

   Goal 5: Build an enabled, productive, motivated, and empowered health workforce.

Source: 2030 HRH Strategy (NDoH, 2020, p. 42).

The goals underscore the importance of the education–training–work continuum . Goal 3 emphasises competence, caring and multi-disciplinary HRH, as well as an education and training system that is socially accountable and geared towards equity. Goals 1 and 2 underscore the enabling functions of needs-based planning, informed by evidence (routine data and research). Goal 4 focuses on the work or practice environment in health, emphasising the critical role of governance, leadership and management. Goal 5 highlights the importance of "caring for the carers" and encompasses a range of strategies and activities to ensure inclusivity, positive practice environments and gender-transformative practices.

Overcoming the Gap between Policy and Implementation

In contrast to the common criticisms of lack of stakeholder

involvement in policy development, we used an extensive consultative and participatory approach in the development of the 2030 HRH Strategy. The process included the integral involvement of government officials, representation of various stakeholders on the MTT and in the broader consultative meetings and ensuring that both technical and political governance structures in the health sector were updated regularly on progress. We also included detailed labour market analyses, the best available evidence and integration of the education-training-work continuum in the development of South Africa's 2030 HRH Strategy. The benefits of this participatory process included the opportunity for stakeholders to submit inputs and shape the final Strategy, enhanced ownership, and ensured a relatively fast adoption of the Strategy as an official government document.

However, two years after the adoption of the HRH Strategy, it remains unimplemented. A major factor that influenced implementation was the Covid-19 pandemic, which was a major shock to the health system in South Africa due to the loss of and harm to health workers, as well as the psychological impact of the pandemic (World Health Organization, 2021). At the same time, the pandemic exposed and amplified the chronic under-investment and insufficient focus on the health workforce (Rispel et al., 2021).

The chronic under-investment is reflected in the lack of finances to implement the Strategy, high turnover of senior officials and weak technical leadership and capacity. As shown by a recent review of HRH policy and plan implementation in the Africa Region of WHO, these issues intersect by creating a vicious cycle as weak leadership for HRH affects financing, planning, coordination and management of the health workforce (Ahmat et al., 2022).

There are three key lessons to enhance implementation of the Strategy. First, there is need for a capable HRH function in the NDoH led by technical experts who can articulate the challenges and advocate for HRH as both a priority and investment. Second, the development of institutionalised capacity is critical to implementation. This is because a capable and capacitated NDoH can provide strategic leadership that foregrounds the education-training-work continuum to ensure a comprehensive HRH information system that covers the entire health system, and take decisive action to improve equity in the distribution of health care providers, between the public and private health sectors, and between urban and rural areas. Lastly, advocacy from the academy and other civil society organisations is critical, and there have been encouraging signs that health workers themselves are joining the struggle for a health system that meets both their need and the needs of the people they serve (Heywood, 2022).

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The Recognition of Prior Learning (RPL) – Success Factors, Proven Benefits and System Enablers

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Summary
The article shares lessons learned from a 12-year-old recognition of prior learning (RPL) programme by the Northern Metropolitan Institute of Technical and Further Education that empowers Australian Early Childhood Education and Care educators' education–work continuum. Programme-level and national system-level success factors reflect strong connections with industry and individualised assessment. Individual and employer mutually recognised benefits include centre capacity, work performance and improved learner confidence.

Keywords
Recognition of Prior Learning
RPL Benefits
Learner Confidence
RPL System Enablers
RPL Success Factors

Introduction

The Northern Metropolitan Institute of Technical and Further Education (TAFE), in Perth, Western Australia has for the past 12 years delivered a recognition of prior learning (RPL) programme that seamlessly connects education and the work continuum through individualised assessment and an authentic workforce development relationship with local employers. This article shares factors and national system enablers that contribute to the success of this 12-year-old RPL programme and illustrates benefits for employers and workers. Two RPL practitioners in the programme, employed by the institute, have gathered data and lessons learned over 12 years conducting RPL for workers in the Australian Early Childhood Education and Care (ECEC) industry sector.

Many ECEC workers accessing the programme have reported to the RPL practitioners that they chose an RPL pathway to gain diploma-level, nationally recognised qualifications and consequently increase their renumeration and employment opportunities[1]. Through the programme, workers holding a Certificate III are recognised for on-the-job learning achieved whilst undertaking tasks beyond their job role, in some instances for many years.

Being able to access RPL that formally recognises their extensive work experience in a way that does not require time away from the job nor the physical attendance to a formal educational institute is attractive to these workers. Many of these workers have not considered educational pathways and are indeed intimidated by formal learning environments. By the same token, some workers confidently chose RPL over traditional educational pathways because they believe they have all the skills required to gain their qualification. This feedback suggests that without the option of RPL, these workers are unlikely to attain further work-related qualifications which would help them progress in their career. RPL acts as the connector for the education and work continuum and a motivator for non-traditional learners.

Reported Success Factors

The RPL practitioners identify key success factors of their programme as a reciprocal relationship with employers,

dedicating staff to the sole provision of RPL pathways and comprehensive candidate orientation to RPL.

Effective Employer Relationships

Australian research shows employer buy-in is a key success factor for any RPL programme. Employer buy-in can be a complex and pervasive challenge for candidates as they struggle to elicit past and present employers' verification of experience, to the extent that many candidates give up and withdraw their RPL application (Carr, 2019; Smith & Clayton, 2009). North Metropolitan TAFE has successfully navigated this challenge on behalf of RPL candidates by building long-standing reciprocal relationships with employers, that is, ECEC centres' management and staff. An indicator of this success is that the RPL programme now requires no marketing for enrolments beyond the institute's website.

Effective employer relationships are critical to maintain the connection between candidates' RPL application and workplace verification.

Maintaining effective employer relationships means meeting the needs of employers' management, supervisors and workers (RPL candidates). Elements of the successful relationship are as follows:

- On-campus industry forums for employers in which training processes, industry knowledge and latest industry trends are shared and discussed.
- Physical presence at centres.
- The RPL practitioners' institutional management understands the value of RPL and supports the RPL team's autonomy and flexibility needed to maintain employer relationships. Research indicates that education institutes' negative attitudes towards RPL transpire as a barrier for successful program and candidate outcomes (Smith & Clayton, 2009).
- RPL practitioners offer RPL candidates support, mentoring and coaching from entry to exit. Employers are then more assured of workers completing and thus realising the employer benefits of this programme.
- Facilitating early achievements which, in turn, motivates candidates to move forward with the collection of assessment evidence. Research shows candidates are more likely to disengage if early submissions are unsuccessful or require additional submissions (Carr, 2019).
- Listening to employers. Formal and informal employer consultations result in fine-tuning assessment processes to meet the employers' needs.

Staff Solely Dedicated to RPL Pathways

Early success of the programme has altered resourcing of the programme. The RPL practitioners, who previously took on both training and assessment responsibilities, now dedicate 100% of their work role to RPL pathways alone. In Australia RPL assessment is frequently "tacked" onto trainers and assessors' job responsibilities, disallowing any meaningful connections with candidates' work environments. In 2020, the RPL practitioners appeared as guests on the webinar series Do RPL Better[2]. They shared that by simultaneously meeting candidates' support needs and employers' workforce skilling needs, symbiotic relationships are established and maintained.

Comprehensive Candidate Orientation to RPL

The RPL practitioners hold two-hour interviews with each potential candidate and maintain this as a critical element of the programme's success. The RPL practitioners seek to understand potential candidates' career aspirations and ways RPL can be optimised.

Because of the comprehensiveness of this interview, candidates regularly work out themselves which units[3] should be "RPL"D" and which units they should attend for training. Along with their systemised approach to monitoring and tracking candidates, the RPL practitioners attribute a 98% success rate to the orientation interview. Workers are becoming empowered learners, able to identify what they know and can do and their competence gaps. They are connecting workplace (informal) learning with qualification (formal) learning outcomes.

Orientation Supports Older Workers Who Chose to Continue the Education–Work Continuum

The RPL practitioners shared that many candidates have not "been in formal learning for 20 years". A 70-year-old worker approached the RPL team after seeing colleagues completing their qualifications via the RPL. She wanted to complete her diploma utilising the RPL of her more than 20 years' experience. Through the orientation interview, the RPL practitioners were able to negotiate a process that dispelled her perceived barriers of fear of failure and lack of computer skills. Fear of failure, loss of confidence in "doing the RPL process" and "fear of the unknown likelihood of success" have been found to be significant barriers to successful RPL outcomes (Carr, 2019). The RPL has supported this worker's choice to stay in the workforce beyond retirement age with no age discrimination for advancing her work–education continuum.

Benefits

The RPL practitioners offer insight into employer and candidate feedback gathered over 12 years.

Employers' Benefits

Without employer buy-in, RPL candidates frequently disengage from the process, thus furthering their disenchantment with formal education (Carr, 2019). Employers' awareness of benefits is a critical factor for buy-in. The RPL practitioners report that employers are satisfied with improved levels of qualified workers required for child/worker ratios, increased employee retention, faster credentialling of staff and less time away from the job to study.

Graduates' Benefits

Graduates benefit from increased income and employment opportunities because of the credentialled outcome. However, these benefits are not necessarily different from those of full delivery pathways.

Benefits specifically attributed to RPL permeate further than what may be initially thought. The RPL programme is associated with improved centre practice and worker performance.

Mutual benefits strengthen the work–education continuum. The RPL practitioners who are also subject matter experts, support candidates to be "instigators for change", if centre practice is deficient in terms of industry standards. They will role model "on the floor" alongside the RPL programme. In this way, **centre practice improves** because of the RPL programme. Additionally, it is obvious through the period of RPL enrolment, candidates tend to acquire more skills and knowledge. This is supported with research that indicates that when candidates reflect on their non-formal and informal learning, improved practice can result (Carr, 2019; Day, 2017; Smith & Clayton, 2009). Employers have stated that, even though RPL recognises prior learning, workers become more motivated to improve their professional practice, and update their skills throughout and after the RPL process. The RPL process ultimately enhances work practice.

However, arguably more important is graduates' **improved learning confidence**. Typically, towards the end of the RPL process, the RPL practitioners noted, candidates come to realise they have learnt more and become more enthusiastic at work and more motivated in their job roles. Centre directors' feedback concurs with this and adds that successful candidates feel more confident as professionals and as lifelong learners.

System Enablers

Primary enabling features of the Australian national (technical) vocational education and training (T)VET sector are a competency-based system, the flexibility principle of assessment and connection with industry stakeholders in qualification design. The enablers effectively link work and formal learning, a critical element for successful RPL systems.

An explanation follows.

- Nationally recognised competency-based qualifications are modular and comprised of units of competency that specify the standard of performance required in the workplace. This modular approach allows RPL to serve increasingly diverse career pathways and, with targeted gap training, the awarding of whole qualifications.

- The principles of assessment (fairness, flexibility, validity and reliability) embedded in the national Standards for Registered Training Organisations 2015 (Commonwealth of Australia, 2019) promote individualised (flexible) assessment whereby competencies held by candidates are assessed no matter how or where they have been acquired.

- The competency-based qualification system is founded on industry validated and monitored occupational standards. Such a competency-based system more easily allows for reliable RPL assessment (Cedefop, 2022) and has the additional benefit of being easily recognisable to employers. Units of competency are developed and maintained by industry bodies (Australian Skills Quality Authority, 2022).

Conclusion

The RPL team at the Northern Metropolitan Institute of TAFE, in Perth, Western Australia has utilised RPL to seamlessly connect the education–work continuum. This article described three program-level success factors identified by the RPL team over the last 12 years: (i) being an authentic workforce development relationship between employer and vocational education provider, (ii) having properly resourced and supported assessors and (iii) providing comprehensive candidate orientation. Mutual benefits from the RPL of ECEC workers, of improved professional performance along with improved employee retention and learner confidence, are evidenced in this article. This article posited that national system enablers that contribute to the success of this 12-year-old RPL programme are a modular competency-based, industry-led national qualification framework and the principles of assessment that allow for flexible assessment.

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2. Run by Skills Education https://www.skillseducation.com.au/ and hosted by Deb Carr (author).
3. Units of competencies are the smallest components of Australia's competency-based VET qualifications

The Role of Career Services in Tertiary Students' Transition to Employment: Voices from Africa

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Summary

The article draws on qualitative data from East and West Africa to shed light on how career services can increase tertiary students' chances of gaining employment. We demonstrate that taking a broader perspective to career services, including providing guidance and counselling, integrating skills development opportunities through curriculum and pedagogical changes and collaboration between tertiary education institutions (TEIs) and employers as well as graduates/alumni, can enhance students' employability.

Keywords

Career Services
Tertiary Education
Africa
Employability
Employers
Students

Introduction

Graduate unemployment and underemployment in sub-Saharan Africa (SSA) is increasing, with negative impacts on young people and their communities (Dodoo & Kuupole, 2017). According to the African Development Bank (2021), 10 to 12 million youth in Africa enter the labour force each year. Out of this, a small fraction (3.1 million) of African youth get jobs, leaving most of the youth unemployed. Scrutiny about the source of this problem often focuses on universities and colleges, the tertiary education institutions (TEIs), since many TEIs take a siloed approach to supporting education, training and work. However, the problem is complex and requires a multi-stakeholder approach to address (Amani, 2017).

An important contributing factor to graduate unemployment/underemployment is the "skills gap" between what young people learn and what is in demand in the labour market (Damoah et al., 2021). According to PricewaterhouseCoopers (PwC)'s 22nd Annual Global Chief Executive Officer (CEO) Survey (2019), 65% of African CEOs said the skills gap was preventing them from innovating effectively. Fifty-nine percent conceded that their quality standards and customer experience were being undermined. In addition, 54% (global

44%) confirmed that they were missing their growth targets because of inadequate skills.

Students need effective career services to help them make the right career choices and develop relevant skills to enhance their transition to work (Okolie et al., 2020). However, research shows a lack of, or limited, provision of career services in TEIs in SSA (Getachew & Daniel, 2016). This paper contributes to the youth unemployment discourse by drawing on qualitative data from East and West Africa to demonstrate the importance of career services in students' transition to employment.

In the next section, we present the definition of employability for this paper and discuss the connected community career services approach. Following this, we present the methods and data used in preparing this article. The last two sections will focus on findings and discussions and on our conclusion.

Employability and Connected Community Career Services Approach

For this article, "employability" is defined as the competencies and skills that make graduates more likely to perform their duties in employment (Okolie et al., 2020). Taking a broader view to employability, Römgens et al. (2020) posited that employability involves the skills and competencies that increase an individual's chances of getting employment and keeping their job, as well as changing jobs/ careers where required.

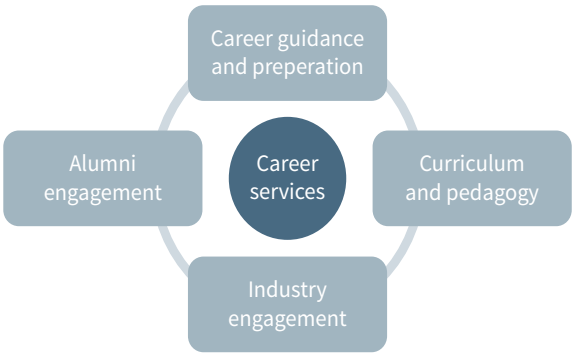
As indicated in the introduction, helping individuals, in this case students, to enhance employability requires a collective effort. However, provision of career services (which is broader than career guidance) in TEIs is critical in achieving this. Inspired by the framework of Dey and Cruzvergara (2014), we propose a broader view of career services called the "connected community career services approach". This approach connects a community of stakeholders within and outside TEIs to work together to enhance students' employability. It comprises four main themes including:

- Career guidance and preparation (initiatives aimed at increasing students' self-awareness, providing information about job opportunities and equipping students with transition skills),
- Curriculum and pedagogy (involves how career services professionals work with academics to imbed employability skills development opportunities in the curriculum),
- Industry engagement (concentrates on collaboration between TEIs and industry to provide avenues for students to develop employability skills) and
- Alumni engagement (encapsulates initiatives that TEIs provide to enhance the employability of their alumni, and how the TEIs work with these alumni to support current students).

We acknowledge that the four components of the approach are not exhaustive. Through relationship building and creating strong career communities within and beyond campuses, career services can provide customised approaches and stronger outcomes for institutions.

The connected career services approach assumes that helping students to develop the needed skills/networks for employment requires a holistic process. This means key stakeholders, especially industry and TEIs, should work together for greater potential impact. Working in isolation will limit understanding of the problem, which will lead to disjointed/ fewer effective solutions.

Figure 1. Connected community career services approach



Findings and Discussions

This paper draws on qualitative data from 17 participants from Ghana, Burkina Faso, Kenya and Rwanda and on a systematic review of publications in the Web of Science, Scopus, the African Education Research Database (AERD) and African Journals Online (AJOL).

In this section, we provide and discuss evidence on how career services can increase students' chances of getting a job. This is presented under three main areas of support, including self-awareness, opportunity awareness and transition competencies and skills.

Self-Awareness

When students start their programmes in TEIs, most will have an idea about their future career. The initial decision is normally influenced by their families and friends. When they are introduced to their courses and become familiar with the expectations and career options, some begin to question their initial career choice and their ability to succeed. To help students get a better understanding of themselves in terms of their strengths, weaknesses and interest, programmes are put in place by TEIs. The importance of self-awareness was highlighted in interviews:

Helping students to get a better understanding of who they are and doing a lot of self-reflection is the first step and this happens in the first year. A lot of students find it difficult deciding what career to pursue and our reflective sessions help them to make the right choices. (Career services professional from Ghana).

The benefits of self-reflection are acknowledged by students who go through these sessions. It helps them to reconsider their initial career options and make changes based on their abilities, needs and interest:

I had a lot of career options when I started my programme. Speaking to career advisors in the reflective sessions as well as talking to my lecturers helped me to decide. I have chosen something I am passionate about, which will motivate me to learn hard to excel. (Student from Ghana).

As mentioned by this student, passion brings excellence and commitment to work, which employers desire from employees:

We are looking for purpose and service, and that is very interesting because many young people unfortunately today just don"t have the attitude of service. Service is, basically, coming in and serving. (CEO from Burkina Faso).

Opportunity Awareness

Providing awareness about job opportunities is vital for students' employability. Students can only take advantage of job opportunities if they know about them. This requires TEIs to collaborate with employers and alumni to ensure that both students and unemployed graduates have the right information. Awareness is provided through various career services initiatives:

They organise the career fair once in a year which is part of helping students to get into industries. At the fair, employers engage with students on campus to introduce students to internship opportunities and job opportunities that students can take advantage of. (Student from Rwanda).

The opportunity to participate in internships and meet with employers to learn about job opportunities proves beneficial in students' transition to employment:

I engaged about five interns from an art background in my organisation. I noticed that about two years later, two of the students had started their own businesses. I was happy I contributed to their career success. (CEO from Burkina Faso).

Similarly, a graduate from Rwanda mentioned how he got employed through job opportunities shared by his university:

The alumni association has a WhatsApp group, and we have our email addresses on the alumni database of the university. That is where they share new job opportunities. I got my second job through the platform, and I know friends who also got jobs by applying to vacancies on the platform.

It is important to point out that opportunity awareness does not necessarily translate into employment. The transition from TEI to work is not linear, and irrespective of how well students do in their programme, they may still struggle to get employment. Students may need other support through friends or family contacts which can be a disadvantage to students from low socio-economic backgrounds. It is also the case that the labour market may favour graduates from certain programmes, and this information should be provided to students. Furthermore, students' expectations for some jobs (for example, the working conditions) may differ from the reality, which could then adversely affect their passion for those jobs once in employment.

When students are provided with this broader perspective of the labour market, for example, through internships and/or engagement with alumni working in the sectors of interest, they will be better prepared for any uncertainties and shocks after graduation.

Transition Competencies and Skills

Transition competencies and skills help students to be successful in their job search and application and to keep their jobs once employed. For example, if a student meets all requirements for a job, but presents a poorly written CV and cover letter which do not demonstrate clearly how they meet the requirements, the application is likely to fail. Skills for writing a CV and a cover letter and excelling in interviews are important for students' employability. This was stressed by a graduate from Ghana:

Even after graduating, I still had the chance to speak to an advisor. I think one of the things I really appreciate from the career services is interview preparation. The support I got really helped me to ace my interviews.

The CV layout and content of a student or graduate is one of the basic measures of skills and competencies used by most of the human resource professionals we interacted with:

For us, if we want to measure a graduate's presentation skills, we will first look at their CV. How a CV looks will say a lot about a person's presentation skills. Are there typing or grammatical errors? It tells me about your writing skills. (Human resource manager from Kenya).

In addition to programmes organised by career services centres to develop students' skills, an important way to

develop skills, such as communication, collaboration and critical thinking, is through curriculum and pedagogic reforms. These are highly desired by employers; therefore, teachers need to create opportunities for students as part of the teaching and learning process. Highlighting the importance of these skills, also called "soft skills", an employer from Ghana said:

> *Students have an academic view of the workplace, which is not the reality, but those that tend to thrive are those that demonstrate good people skills and can think critically.*

Corroborating this view, another employer from Rwanda stressed this point:

> *We don't really care about the technical skills. It is the soft skills. I have recruited graduates who were top of their class. Some with a grade point average of 3.98 (out of 4), and they were fired. Some were fired because they did not have the character to back the competence.*

Further research should be done to better understand the meaning of soft skills in diverse work environments, as this expression might be used for totally different purposes at an enterprise level.

Conclusion

This paper has discussed the role that career services at TEIs in East and West Africa play in students' transition to employment. It suggests that when career services are understood broadly to focus on a community of stakeholders working together, it enhances students' employability. The authors therefore encourage TEIs to strengthen collaboration with employers, alumni and academics to design responsive curricula and create opportunities for students to develop competencies for work and life. This reflects a positive evolution from the 1980's when guidance was largely based on psychological instruments, without considering the employment and enterprise contexts. This evolution is also a reflection of the education–training–work continuum approach that aims at "desiloizing" these three worlds by creating interactions between them for the sake of students, TEIs and business.

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Part 5

Education–Training–Work Continuums as a Transitional Way Out of Crisis

Digital Tech, Migration and Learning for Work: The Janus Effect in Times of Crisis

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Summary
The use of digital technologies has both positive and negative implications for the lives of migrants. If migrants are indeed to use digital tech to learn, train and work throughout the education–training–work continuum, then policies need to be introduced at the heart of digital tech that explicitly seek to mitigate the increased inequalities to which they give rise and foster equity.

Keywords
Migrants
Digital tech
Inequality
Equity
Learning

Context: The Janus Effect in Times of Crisis

Two-faced Janus was the ancient Roman god of beginnings and ends, of duality, of gates and transitions, of passages and frames (Porter, 2019). He thus represents many dimensions of both migration and the education–training–work continuum: beginnings and ends, the importance of gates and gatekeepers, the life transitions involved, the passages of migration and learning and the frames or contexts within which migrants experience their learning and working lives. However, Janus's fundamental duality also represents an essential aspect of how digital technologies are themselves used at all stages of the education-training-work continuum: to do good, or to do harm.

Digital tech has been widely promoted as a "solution" to many of the world's problems, and especially to providing appropriate education and training for work. For migrants and refugees, it is promoted as a means through which they can maintain contact with families and friends, gain employment, send money home more easily and share their identities and qualifications with potential employers at a distance (McAuliffe, 2021). Yet, migrants' uses of digital tech also represent significant risks and can cause very real harms (Farbenblum et al., 2018; Guberek et al., 2018). Digital tech is used to surveil migrants, to deceive them and to abuse and oppress them, and they too can use it to cause such harms to others. This Janus duality of both migration and digital tech is considerably exacerbated during times of crisis, most recently seen during the COVID-19 pandemic and in the invasion of Ukraine by Russia.

One key to understanding this duality is to recognise that digital technologies are all created and designed with

very specific interests in mind; they also have unintended consequences. It is therefore scarcely surprising that companies work so hard to subvert civil society organisations, the UN system and international agencies into believing that digital tech does indeed represent "the" solution to most of the world's crises. This was particularly so during the COVID-19 pandemic, when much attention was paid to its uses to support education, training and new work patterns that enabled the separation and distancing of people from their former places of learning and working. Moreover, digital tech is likely to be used increasingly in the future to enable many more people who in the past had to travel physically as migrants to new work locations instead to work virtually from their homes.

Migrant Diversity and Uses of Digital Tech for Education, Training and Work

This overview is based in part on our work within the MIDEQ Hub which explores diverse aspects of migration among 12 countries in Africa, Asia and Latin America[1], and from which four key issues can be identified (see also International Labour Organization (ILO) and International Organization for Migration (IOM), 2021; McAuliffe, 2021):

- First, migrants are very diverse, and it is not helpful to make too many sweeping generalisations about them. A well-educated migrant with good, recognisable and certified digital skills from one country will have very different employment opportunities than someone from another country who only knows how to use WhatsApp or YouTube.

- Second, it is nevertheless possible to draw some general conclusions about how most migrants, especially the least advantaged, do use digital tech: most only use a limited number of popular apps, very few use any apps designed specifically for migrants, mobile phones dominate and their prime use is for social interaction.

- Third, many migrants aspire to use digital tech for training and learning, for generating income and for commercial activities. However, significant numbers of migrants still do not have the essential skills and awareness to be able to use the technologies that they already have for these purposes. They are thus not well placed to benefit from the potential of digital tech to support a joined-up approach to the Continuum.

- Fourth, migrants are often aware of the dangers of digital tech being used for surveillance purposes, but many (especially women) are still affected by the violence and abuse that are so prevalent in their use. There is therefore an important need for migrants to receive appropriate training in the wise, safe and secure use of digital tech.

Promising Practices

Numerous apps have been developed by international agencies, civil society organisations and companies to support migrants (see MigApp, developed by IOM, and with 10K+ downloads on Google Play; RedSafe, International Committee of the Red Cross (ICRC)'s digital humanitarian platform with 50K+ downloads on Google Play; and RefAid)[2]. Other, more local, apps include Shuvayatra (developed by the Asia Foundation and partners for Nepali migrant workers, with 50K+ downloads on Google Play) and Apprise (used to uncover labour exploitation in South-East Asia). The numbers of app downloads indicate that they have value to many people, but even 50K represents only 0.018% of the world's 272 million international migrants (2019) (estimated by IOM).

Very few platforms or apps yet specifically address the Continuum needs of migrants within Africa, Asia and Latin America (for examples of digital tech in training for work, though, see Omar Dengo Foundation in Costa Rica, and the GIZ-funded Pro-Educação in Mozambique; see also ILO and IOM, 2020). In part, this is because of a reticence to support the use of digital tech in vocational training programmes more generally (see Comyn & Unwin, 2020). Despite this paucity, the growing international emphasis on life-long and life-wide learning (UNESCO, 2019) gives hope that greater emphasis may be placed in the future on appropriate use of these technologies in providing relevant training for a wide variety of jobs (see UNESCO-UNEVOC TVET in a Digital World, and the UN's 2022 Transforming Education Summit). The useful report by ILO and UNESCO (2020) on the digitalisation of skills systems and technical and vocational education and training (TVET), emphasises that as the use of digital tech becomes more and more pervasive, it will undoubtedly be used much more widely for TVET. One of the most important ways that digital tech can be used to blend the sectors of the Continuum is by providing mutually acceptable and secure qualification and certification systems for migrants that can be recognised across different contexts.

There nevertheless remains a danger that migrants will still be left out of these more formal programmes, especially in crisis situations where governments tend to focus more on their own citizens than they do on immigrants. To some extent, the informal nature of much of the content available on digital platforms may help to mitigate this problem. YouTube is thus probably the biggest global platform for informal skills training, and even more people turned to it for training during COVID-19 as they sought additional skills to solve the new problems that they were facing. Migrants who have sufficient access and basic digital skills and can afford the connectivity charges are readily able to avail themselves of such resources.

A further avenue for effective digital training across all the Continuum sectors is illustrated by the activities of those employers who see it in their self-interest to provide migrant employees with the skills and education to be able to do online training related to their work. Some companies in Malaysia, for example, who employ large numbers of migrant labourers from Nepal, specifically sought to upgrade their workforce through the use of digital tech during the COVID-19 crisis. Even if this upgrading is motivated by self-interest, it does provide migrants with both generic and task specific digital skills that can be put to good use subsequently for work.

Policy Implications

Four broad conclusions seem appropriate:

- First, digital tech can be used anywhere and at any time, but only as long as users have access, can afford it and know how to use it. If these conditions are met, migrants can benefit considerably across the education-training-work continuum.

- Second, the acquisition of basic digital skills is becoming increasingly essential for many types of employment, and thus it is important for migrants to gain such skills before seeking work overseas.

- Third, online specialised and formal skills training can be extremely valuable for those who can afford it. However, informal alternatives, such as those available through YouTube, also provide valuable sources of training (as well as other aspects of education) for migrants. Care must be taken not to waste resources on developing new content and training where relevant material is already available.

- Fourth, and looking to the future, the potential of new digital tech must also be anticipated. virtual reality (VR) and augmented reality (AR) are already becoming important tools in training as well as for entertainment.

Three important policy implications building on these can be recommended. First, it must be appreciated that the oft-espoused equity principle implies that the more marginalised a context is, the more resources will need to be directed to ensure that everyone can benefit along and across the Continuum. Many migration contexts involve marginalised individuals and communities, especially where migration is forced or when refugees are involved. Hence, governments of both sending and host countries must allocate additional resources should they wish to deliver such services (including education) equitably to everyone living in their territories.

Second, the most important thing that can be done to help the most marginalised migrants gain relevant education and training for work is to ensure that they have the basic knowledge and skills to be able to use digital tech appropriately. Many skills can now be obtained freely through the Internet, but only if people have the knowledge and ability to access it. Digital skills training for the most marginalised has been undertaken for at least a quarter of a century, and it is a sad reflection that so many people still remain without it.

Finally, all such support for migrant education, training and work reiterates the importance of safety and security when using digital tech. This is a continuum-wide necessity. While cyber-security should be ensured by the companies creating digital platforms, it is also incumbent on all those working with migrants and digital tech to ensure that migrants have the knowledge and wherewithal to remain safe and secure online. Only then will the Janus-like positives and negatives of digital tech be mediated safely by migrants, at the beginning, in transition and at the end of their journeys as well as across the Continuum.

Endnotes

1. These countries are Brazil, Burkina Faso, Côte D'Ivoire, China, Egypt, Ethiopia, Ghana, Haiti, Jordan, Malaysia, Nepal and South Africa. See https://mideq.org for further information on the overall MIDE Hub, and for our own specific work on technology inequality and migration, see https://ict4d.org.uk/technology-inequality-and-migration/, which facilitates migrants and tech developers crafting digital tech that may reduce migrant inequalities. This research was supported through MIDEQ which is funded by the UK Research and Innovation (UKRI) Global Challenges Research Fund (GCRF) [Grant Reference: ES/S007415/1]
2. For further examples, see our list at https://ict4d.org.uk/digital-technology-use-by-migrants/

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Eco-Ed: Pathways to Sustainability

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Summary

According to the Organisation for Economic Co-operation and Development (OECD, 2018), the key to the preparation of "future-ready" learners is to promote agency among the learners and to recognize the importance of their networks of connection in enabling or inhibiting learning. This article considers the implications of agency and context for the wider education, training, and work systems.

Keywords

Ecological Education
Sustainable Education
Engaged Citizens
Agentic Learners

Eco-Ed: Pathways to Sustainability

There has been a shift in focus within the sustainable education training and work debate. Until recently, the focus was almost exclusively on operational matters, such as recruitment, delivery, retention, progression, and recognition of prior learning. Little attention was paid to the content of what was delivered and its relevance to contemporary challenges, such as climate change, food insecurity, poverty, and mass migrations.

Recent publications by the International Labour Office (ILO) and OECD show evidence of this shift. The ILO report entitled "World Employment and Social Outlook – Trends 2019" (ILO, 2019) cites the persistence of a number of major deficits in attaining the goal of work for all, as set out in the Sustainable Development Goals (SDGs), particularly SDG 8. The main problem it notes is the poor quality of employment. Concern is also evident in the OECD's paper entitled "The Future of Education and Skills" (OECD, 2018). It points to the need for education to ". . . do more than prepare young people for the world of work; it needs to equip students with the skills they need to become active, responsible and engaged citizens." (OECD, 2018, p.4). The OECD goes on to note that "future-ready students need to exercise agency, in their own education and throughout life. Agency implies a sense of responsibility to participate in the world and, in so doing, to influence people, events and circumstances for the better." This focus on agency as a desired learning outcome is accompanied by a shift from solely focusing on the learner as an individual and towards a recognition that the range of relationships in which the learner is embedded impacts learning. The OECD goes on to note that in order to enable agency, educators need to recognize and allow for the impacts of these relational contexts on all involved – students, teachers, school managers, parents, and communities.

Ideas that promote agency as a learning priority and that acknowledge the importance of context are not new. These ideas permeate much of the literature that underpins radical adult education and have done so for many decades. What we know from this literature is that promoting agency is complex. For example, "being agentic implies a capacity

to conceive of a line of action to bring about sought after change. This necessitates knowing what outcome is required and being able to identify the power, authority and right necessary to execute the planned line of action" (Ryan & Murphy, 2019, p. 83). We also know that agency does not and should not shy away from questioning hierarchy, tradition, and power. This can pose big challenges within a system where these are largely seen as fixed and irrefutable.

Alongside agency, the OECD points to the need to appreciate the nature of the engagement between students and those who impact their lives whether directly or indirectly. "Educational endeavors take place within particular cultural and organizational contexts. Influences from these are potent forces in shaping, constraining or facilitating learning" (Ryan & Walsh, 2019, p. 5). Learning that takes account of these contexts recognizes and allows for all the stakeholders to be transformed. In such an approach, these stakeholders would all be involved in the creation of knowledge and worldviews that value ethical, sustainable, and resilient ways to live. That is very different from how education and training currently operates. Mainstream approaches tend to position learners and their associates as "knowledge deficient." Discourses relating to disadvantage rarely if ever position those who are disadvantaged as sources of knowledge. On the contrary they assume that an important cause of disadvantage among individuals and groups is a lack of knowledge. By contrast, agentic learning pedagogies position these outsiders (especially those who have been poorly served by mainstream education) as knowledge pioneers, possessing and passing on knowledge and creating knowledge as they need it. Their survival in largely hostile local and global environments is evidence of how well they do this. Furthermore, these "outsiders" are recognized as vital players in the creation of "really useful knowledge" that seeks to better understand and intervene in the complex political, cultural, and psycho-social dynamics that constitute the contexts in which these "outsiders" exist.

Table 1 illustrates some of the vast differences in an approach such as that being promoted by the OECD and what already exists. The first column presents a mainstream perspective that is largely in keeping with current trends in targeted funding within the education–training–work sector. The second column is designated ecological. It draws on an analysis that prioritizes agency and understanding the systems in which we are embedded. Oppositionalities are not always useful in enabling the kind of dialogue necessary to reveal the nuanced issues that invariably inhabit complex problems pertaining to education-training-work and the challenges education currently faces; however, in this instance, they serve to expose how an unquestioning acceptance of the status quo can focus attention on the symptoms of education, training and work failures rather than the causes and, in so doing, compensate for, rather than challenge, the deficiencies of the wider system. Table 1 also highlights the shift in thinking that is urgently needed to be relevant within the sustainability concerns that the OECD document raises.

Table 1. Approaches to education, training and work

	Mainstream	Ecological
Perspective on problems that currently exist	Unfortunate occurrences	Predictable occurrences
Location of the problem and the solution	Individuals/ groups/ participants	Service or system
Desired outcome	Increase the numbers entering and staying in the system	Address structural inequalities in mainstream services
Main concern	Maintain the integrity of the system	Create system that can meet diverse needs
Perception of knowledge and skills	Transmit what is already known	Create conditions to enable the co-creation of knowledge

Perspectives on the Problems within Education, Training and Work

An approach to problems that sees the failures within education, training and work provision as unfortunate or haphazard occurrences obscures the deep-rooted, systemic, and self-perpetuating nature of exclusion and the embeddedness of mainstream education in that cycle. It ignores the widespread statistical evidence that points to the importance of socio-economic status in determining the future success or failure of individuals within the worlds of education and work. These statistics suggest that education, training and work provision, like education in general, compounds rather than compensates for existing disadvantages.

By contrast, an approach that acknowledges the economic and power inequalities at play outside the education, training and work system is better positioned to understand the nature and scale of the problem and to consider the values, beliefs, assumptions, and practices that shape and sustain a mainstream education system, including education, training and work that does not, cannot, or is unwilling to serve the interests of particular groupings.

Location of the Problem

When the problem is located in individuals and groupings, they become the main focus of attention. Failures within the service are often attributed to participants' failure to engage appropriately with the provision. The terminology

used to describe learners often highlights this; words such as mature, special needs, non-traditional, not in education, employment or training, all point to the "outsider" status afforded these individuals. Once these participants have gained access, special supports are put in place to retain them within the system. Such supports again focus on these learners' differences in terms of how they process information or respond to established teaching and examining procedures and lifestyle issues, such as their need for childcare or wheelchair ramps. These differences are not seen as a resource to be drawn upon but as deficiencies to be compensated for or rectified. Access to education, training and work under these conditions implies a degree of benevolence on the part of a system that accommodates these "outsiders" as exceptional cases.

If, on the other hand, the problem is located in the system, then the focus of attention shifts towards identifying the deficiencies of the system. This approach is concerned with knowing how the system works, how it reflects and reproduces existing inequalities in society, and how it reveals the values that sustain it. It raises questions as to who benefits from how the system currently functions and what motivates the financial investment and effort on the part of education, training and work providers that seek to "fit" individual students into the existing system and how the education, training and work system, in turn supports, the broader system of mainstream educational provision.

The Main Concern

Those whose primary concern is to fit otherwise excluded students into the system tend to be concerned with maintaining the integrity of the system, in particular, with maintaining existing standards. One aspect of the "maintaining standards" discourse is a concern not to over-advantage non-traditional students through the provision of supports. A concern of this nature is only meaningful in the context of the competitive dimension of student performance in examinations. This assumes that ranking students according to their relative performances is a worthy educational aim and that a "level playing field" is a realisable or desirable condition for the provision of education or training. If the values that underpinned past practices and that resulted in excluding certain groups of learners are the same as the values that underpin current practices that seek to include some members of these groups, this constitutes an unchanged elitist stance.

The ecological position has no commitment to maintaining the integrity of the current system. On the contrary, if the problem is endemic in the system, then unless the system is fundamentally reformed, it will continue to exclude in ways that are eminently predictable. Until diversity is nurtured as a source of strength, initiatives designed to widen participation are in danger of perpetuating an approach to education where all but a selected few of those who are deemed different remain excluded and those who are deemed worthy of inclusion are corralled and manipulated until they conform to the mainstream ideal.

The Perception of Knowledge

Mainstream perspectives accept the current parameters that define worthwhile knowledge. Although research conducted within this perspective may dispute the validity of aspects of this knowledge and/or seek to build on the existing knowledge base, the broad parameters of what is deemed worthy of attention relies almost exclusively on Western scientific knowledge and is determined by a limited number of experts, academics, publishers, journals, and academic institutions. Those who do not have access to these channels, or whose ways of knowing do not conform to traditional academic practises, have little opportunity to influence the knowledge creation process.

The ecological approach is concerned with establishing practices that can democratize the process of knowledge creation and raise questions regarding our strong, if not exclusive, reliance on the academy as the primary and legitimate creator and holder of worthwhile knowledge. Traditionally bounded disciplines that characterize mainstream educational provision make it difficult to reveal and explore the interconnectedness of social, environmental, and economic realities. The ecological approach seeks to establish forums where all stakeholders, particularly those who are excluded and or not well served at present, can play an active part in refashioning our understanding of the world and the provision of educational services. Forums of this nature are needed at the levels of policy-making and co-ordination of provision as well as at the level of implementation. Furthermore, ecological education requires policy-makers, practitioners, and funders to ensure continuity in approaches to education, training, and work with a view to achieving the necessary levels of fundamental reform. Continuity ensures complementarity within the education, training and work domain, and it is vital to foster capacity for ongoing purposeful responses to problems and difficulties as they arise.

Current social, economic, and especially environmental challenges have exposed terminal weaknesses in our approaches to education, training, and work. The urgency of these challenges may well be the catalyst that forces us to reappraise what we are doing, why we are doing it, and how we can do it differently.

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Do Development Initiatives in Sierra Leone Contribute to (Dis)connections in the Education–Training– Work Continuum?

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Summary

The article reflects on how aid interventions in post-war Sierra Leone likely contribute to discontinuities in the education–training–work continuum. Though interventions are all well-intended, design and implementation shortcomings often contribute to graduates and trainees being underemployed, informally employed, or unemployed. A multi-stakeholder approach which includes the formal private sector is needed.

Keywords

Skills Development
TVET
Aid
Labour Market
Sierra Leone

Introduction

The skilled workforce in Sierra Leone has expanded significantly in the past two decades since the civil war ended in 2002. The expected years of schooling has increased from seven years in 2000 to 10.2 in 2019 (based on the Human Development Report 2020), there is vast vocational training opportunities (Harris, 2020), and data from the Tertiary Education Commission show increasing numbers of graduates from tertiary institutions. According to predictions of human capital growth models, expansions in human capital should be good for growth and development.

The increase in skills has been driven by several actors. The Government has allocated increasing resources to education and skills training, and notably launched the Free Quality Education Programme in 2018. The National Youth Commission serves to enhance skills and productivity among youths through training and internships. The development community (donors and non-governmental organisations [NGOs]) has supported these initiatives and implemented their own programmes.

The expansion in skills, however, has not been matched by absorption of workers into formal employment. News headlines such as "Help! I am an unemployed graduate" and "67 percent of youths are unemployed" have become increasingly popular in recent years. Alongside this, underemployment and engaging in informal work until formal employment becomes available is common. These observations occur while employers report skills shortages and unfilled vacancies (Darwich, 2018; Mannah & Gibril, 2012). This suggests discontinuities in the education–training–work continuum.

The present article reflects on how interventions by the development community in post-war Sierra Leone likely contribute to discontinuities observed in the Continuum. Qualitative data from fieldwork in 2017–2018 inform the analysis and cover interventions in higher education

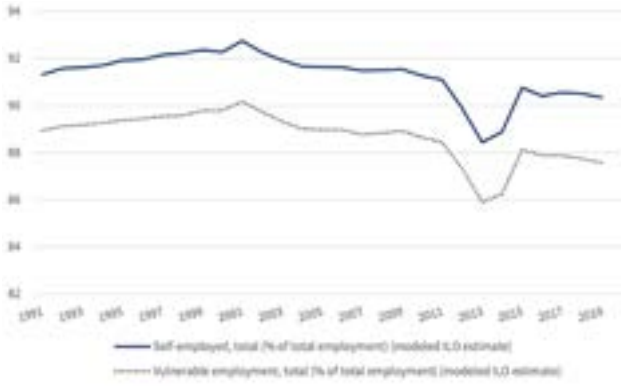
(university-level), technical vocational education and training (TVET) and entrepreneurship promotion. Interviews were conducted with employers, government officials and staff from NGOs and donor organisations, and focus group discussions with university graduates. More on data, methods and an expanded discussion on results is available in Harris (2020).

The Sierra Leonean Context

Sierra Leone is a small low-income West African country with population of about eight million. The decade-long civil from 1991 to 2002 devastated infrastructure, lives and livelihoods. Its effects can still be seen today. It also gave rise to an influx of aid in the immediate post-war years, according to Kanyako (2016), who argued that the government's inability to absorb such large inflows led to the NGO sector developing and to local donor offices overseeing programmes/projects. These agents are still well established actors in the economic, political and social landscape of Sierra Leone. The 2014–2016 Ebola outbreak put further strain on the country and affected both education and the labour market.

According to International Labour Organisation (ILO) estimates, the unemployment rate is estimated at 5%. This, however, masks significant precarity and job insecurity, as an average of 90% are self-employed and 87% are in vulnerable employment (Figure 1).

Figure 1. Self-employment and vulnerable employment in Sierra Leone



Source: The World Bank's World Development Indicators

Thus, the need to promote and support decent work is critical. It is a need than many in the development community have tried to tackle by funding/supporting skills training programmes/projects. Selected examples in the decade 2010–2020 are given in Table 1.

Have Development Initiatives Contributed to (Dis)connections in the Continuum?

Here, three categories of development interventions are presented and their potential to disrupt the Continuum discussed.

Table 1. Approaches to education, training and work

Donor	Programme/Project
African Development Bank (AfDB)	• Enable Youth • Youth Entrepreneurship and Employment Project
Foreign and Commonwealth Development Office	• Sierra Leone Opportunities for Business Action • Business Bomba
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)	• Employment Promotion Programme • Mines to Minds
Japan International Cooperation Agency (JICA)	• Employment Promotion and Entrepreneurship Support for the Youth
United Nations Development Programme (UNDP)	• Business Development Service • Youth Employment Empowerment Programme
World Bank	• Youth Employment Support Project • Skills Development Project

Source: Extracted from Harris (2020, p. 275–279).

1. Higher education (university-level): Shortly after the Sierra Leone Civil War (1991–2002), the Department of Peace Studies at the University of Bradford (UK) – with financial assistance from the then-Department for International Development – worked with Fourah Bay College, University of Sierra Leone, to establish the Centre for Peace and Conflict Studies (Africa Centre, 2004, as cited in Harris, 2020). University staff interviewed reported that without development partner assistance, the Centre and associated courses would not have existed given the University's resource constraints. Recent data now show that graduates from courses in Peace and Conflict Studies form the largest group from any one single course (Harris, 2021, pp. 555–558). In the labour market, however, employers see these courses as lacking depth in technical and analytical skills. These graduates are therefore more likely to be unemployed comparatively (Harris, 2021).

2. TVET: Programmes/projects (such as those in Table 1) attempt to improve employability by enhancing skills among beneficiaries – usually youths. Most programmes have the dual objectives of poverty alleviation and sometimes promote gender equality. Training tends to be in carpentry, masonry, tailoring, welding, mechanics, plumbing, electrics, hairdressing and agriculture production. Skills for the mining sector have also been supported by GIZ. Apart from the latter, the others largely

follow from the Disarmament, Demobilization and Reintegration (DDR) initiative in the post-war years. The main issue here is that there is little to no private sector consultation (to understand labour demand) in the design and implementation phases. The exception in the data is the GIZ mining-related training example. At the policy level, donors have come together to form the National Technical Vocational Coalition, but neither the Ministry of Education nor the Ministry of Labour have driven the process, and again few private sector companies were involved.

3. Entrepreneurship promotion: Most of the programmes/projects in Table 1 also promote entrepreneurship, with technical training being complemented with business skills, and in some cases, a small amount of seed capital. The issue that emerges here is that beneficiaries are rarely followed up after the training intervention, and in cases where there is anecdotal evidence of tracing, most seem to be in informal self-employment. This suggests a transition to self-employment, but of a precarious and vulnerable nature.

Factors Contributing to The Disconnect

Donor interventions in skills training, particularly in the 1990s, have been assessed in the literature. McGrath (2002) noted that curriculum, pedagogy and equipment often reflect donor traditions, with little concern for local labour markets. Palmer (2007) similarly argued that interventions have been top-down, with little labour market relevance or support to use skills after training. A subsequent contribution by Palmer (2014) contended that a crucial issue was vague definition of goals related to skills development, and the resultant ambiguity in measurements.

The Sierra Leonean case suggests four design and implementation factors that likely contribute to discontinuities:

1. Policies and programmes are insufficiently tailored to local labour market demand. Instead, they are often based on donor priorities and there is little consultation with the formal private sector. This echoes findings by McGrath (2002) and Palmer (2007).

2. There are path dependencies in programmes/projects, which imply a failure to keep pace with changes in labour market and economic dynamics. Some projects, for example, GIZ's Employment Promotion Programme began its first phase just after the war. Then, the programme was well-targeted and met local needs. Subsequent phases continued with similar interventions in largely the same provincial areas, without properly responding to changing local realities.

3. Very few donors interviewed engaged in any systematic follow-up of trainees. Most reported numbers trained, but had little or no data on the employment status or wages/profits earned by beneficiaries, or even if the training had positively contributed to employment. This makes it less possible to trace and thus strengthen the Continuum.

4. A "missing middle" in entrepreneurship programmes emerges. Many of the university graduates who participated in focus group discussions expressed some interest in entrepreneurship, but were constrained by limited access to capital. These types of entrepreneurs fall into a missing middle in the financial market. They are too small to benefit from large on-lending agreements (financed by donors like AfDB), but too large for donor-funded microcredit to be useful.

Conclusions and Ways Forward

The interventions discussed here were intended to reduce blockages in the Continuum, reduce the stock of youths not in education, employment or training (NEET), and promote development in Sierra Leone. However, design and implementation shortcomings have led to a large share of graduates and trainees being underemployed, informally employed or unemployed – though this was unintended. On the other hand, donors have helped the Continuum somewhat directly as they employ local workers and are perceived as fairer recruiters in Sierra Leone (Harris, 2020). Albeit, where likely disruptions in the Continuum emerge, they should be corrected.

Mitigating these effects requires a multi-stakeholder approach in which the formal private sector is integral to programmes and policies which target skills and employment. Workers in Sierra Leone, as in other developing countries, want "good" jobs which offer decent pay and contract stability. The formal private sector offers this as contracts are more stable (relative to employment with NGOs/donors which are short-term and linked to programme funding), and recruitment is seen to be marginally fairer compared with the public sector (Harris, 2020). As with any market, policies that increase supply (of workers in this instance), without a coordinated demand-side intervention, will inevitably witness a surplus. In this case, this is evidenced by a high number of youths exiting training and entering NEET status.

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The Significance of the Education–Training–Work Idea for Managing the Global Crisis of Youth Unemployment

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Summary
The idea of the "continuum" developed by Michel Carton and Aude Mellet (2021), it is argued here, presents possibilities for understanding and analysing the work realities of people in much more empirically realistic ways. It both dissolves the boundary between formal and informal work and brings informality into much greater recognition.

Keywords
Employment
Formality
Informality
Work Transitions
Global South

The crisis of youth unemployment in many parts of the world is deep. It has not only personal implications for young people but has introduced debilitating social effects into the communities where these young people find themselves. Demeke (2022, para. 3) stated, to emphasize the point, that "unemployment is often a key reason for political and social movements" and looked at the examples of Kenya, Ethiopia, Uganda, Sudan, and Somalia to show the impact of youth unemployment on political instability. The South African case has particular relevance for the world. Not only does the country have the highest inequality Gini co-efficient in the world (see Leibbrandt, 2021), but it also has staggering unemployment rates. While the current official national rate stands at 34.5% for the employable population, for young people aged 15 to 24, it stands at 63.9%, and for those aged 25 to 34, it stands at 42.1% (Statistics South Africa, 2022. p. 2).

There is a consciousness in South Africa, as there is in many parts of the world, of the gravity of the question of youth unemployment, but little, by way of response, concerning how to tackle the problem in its entirety. In South Africa, the state has introduced through its Presidential Employment Stimulus initiative a Social Employment Fund, which is intended to produce 50,000 new employment opportunities (Ramaphosa, 2022). Important as this intervention is, it still leaves the situation of more than four million young people unaddressed. As with any response anywhere in the world, it would be of critical importance that it addresses the multi-level nature of the problem – specifically, the structural form of the global economy. This global economy is currently geared towards high-skilled needs and neglects economic systems and arrangements in many parts of the world built upon what are regarded as low-skill labour. It includes educational systems which struggle to align themselves with the work-place; and, no less significantly, planning frameworks which, as they stand in many parts of the world, misunderstand and misrecognize the situation of young people, their skills, capacities, and interests.

The urgency of changing the structure of the global economy is now widely recognized (see Stiglitz, 2010). How this is

to be done is, as commentators acknowledge, a matter of struggle. Important in that struggle, it is argued here, is how the problem is understood sociologically. In most analyses, the actors/stakeholders in the problem are presented and defined in particular ways. If they are formally employed, they enjoy a particular kind of enfranchisement. They are recognised and acknowledged. If they are not employed, they exist on the margins of visibility and are vulnerable even to the point of nominative erasure. This produces a form of disenfranchisement where they often lose political and economic rights and protections. In some statistical frameworks of the world, extended unemployment is cause for one's permanent removal from accountability systems and not being included, as in South Africa, in unemployment figures. As unemployable, people are dispatched outside of the formal system as irredeemable non-subjects. Inequality is constitutively produced in this way.

The important issue to come to terms with here is how one comes to classify and explain what in dominant economic and sociological explanations are described as the informal and the formal sectors. What dominant explanations do, with exceptions in innovative contexts, is to separate out, to distinguish the formal and the informal as structurally discrete realities.

It is here that Michel Carton and Aude Mellet's (2021) concept of the continuum presents itself as a way of returning to the problem with perspectives that provide us with possibility. Their idea is that "formal and non-formal learning; basic and vocational education and training in educational establishments and workplaces as well as working are complementary processes that interact independently of the sequential order in which they are undertaken" (Carton & Mellet, 2021, p. iv). Implicit in this understanding of the learning–work relationship is a recognition of the complete citizenship – a state of enfranchisement – of everybody. The idea of the continuum draws attention to the complex relationship between learning in structured and unstructured settings and the experience of work. As Carton said in his seminar presentation, it refers to "something that changes in character gradually, without any clear dividing point." Critical, conceptually, is how the human beings in the relationship between learning and working are understood.

As Carton and Mellet's work (2021) makes clear, people's realities are complex. African realities, as they currently present themselves, where 85% of employment is informal, provide a clear example of this complexity (see International Labour Office, 2009). People's lives and work situations are permeable in physical and temporal terms. They find themselves in a multiplicity of situations in relation to both the formal and informal. Sometimes, they are largely and only in the formal or what comes to be understood as the informal. More often, in the experience of countries such as South Africa, they sometimes find themselves in evolving and ever-changing relationships between these supposed juxtapositions such that they are never completely outside of the intricacies of either. What the idea of the continuum does is to reconstitute the world of learning and working as an inclusive whole. It seeks to bring together and hold in a single frame the whole of people's experiences and to comprehend and confront it in all of its complex and messy dimensions.

What is important in bringing together the continuum's "whole-of-life frame" is that it invites an engagement with the interconnectedness of the social and economic systems in which people live. What is important about this interconnectedness is recognizing the sophisticated decisions people are making to sustain themselves. The interesting reality, not much attended to in our studies of these spaces, is the extent of the innovation that is taking place in this space of interconnectedness. This innovation is often technological, and people are developing the technology to suit their own needs. A case in point is the use of internet technologies in many parts of Africa – their use in facilitating financial transactions, and, critically, the evolution here of new apps. As Hashim and Meagher had already pointed out in 1999 (Hashim and Meagher, 1999), even the highly formal structures holding up financialization have in several African countries been thoroughly reconstituted beyond their apparently impenetrable rigidities. This informality is a critical new feature in how many societies are now working, especially in thinking at the macro end of the economy. It is transnational, and it is extra-legal in the sense that it is not observing regulatory frameworks, such as those which seek to control financial flows, and, as a consequence, it is giving birth to invisible but powerful new economies that are not accounted for. An interesting example is the less eye-catching innovations in sectors, such as recycling and waste management, and the complex ways these innovations connect, often productively, with the demands of the formal economy. In these terms, people's experiences are lived as a continuum.

Should these experiences, applying the idea of the education–training–work continuum within the specific world of work, be left to evolve and develop on their own terms? No, because, entering this space are both formal structures and informal interventions, which are susceptible to, in the absence of inclusive and fair regulation, and open to the abuse of actors with vested and self-serving interests. An example is the rise of extortion gangs hiding behind unemployed people in the construction industry in South Africa. Critical are interventions with public good possibilities. And so important now is how the positive is promoted and the negative is discouraged. Most important is finding ways of recognizing and giving value to these developments. Current regulatory mechanisms do not recognise, much less

understand, this space. It is, as a consequence, left to take its own way. Of concern must be the urgency of developing frameworks for acknowledging what is happening in informal structures and for measuring what is happening and working with it in ways which give dignity to people. Dignity is afforded in being seen and being acknowledged as productive citizens. What the Continuum enables is acknowledgement of initiative and agency and the extraordinary opportunity of thinking how the seemingly discontinuous worlds of formality and informality can be brought into a dialogical engagement underpinned by values of social justice and equality.

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Part 6

Education–Training–Work–Continuums in a Future-Oriented Perspective and Challenging Current Narratives about Changing Education, Training and Work

In Defence of Discontinuities: Strengthening the Barriers between Education and Work

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Summary
Life is much more than work. Education is much more than training. Gearing education ever more closely to the currently unequal and exploitative world of work would exacerbate rather than redress the fundamental inequities. Discontinuities between education and work are vital to preserving the former's integrity. The colonisation of the schoolroom by the workplace must be stubbornly resisted.

Keywords
Discontinuities
Education
Education and Training
Vocational Education

Introduction

This contribution to the discussion takes forward the authors' work on education's forthcoming fundamental transformation. It is contended that Education is entirely distinct from and utterly unrelated to the world of Work, (as tabulated in Table 1):

Table 1. Four classifications within two continua

Category	Characteristics	Content
Work	Sporadic and remunerative	Employment, including self-employment (interwoven with training)
Training	Purposive and supplementary	Generic and specific, predominantly work-related but extending to social, hobby, family and other skills (interwoven with work)
Education	Lifelong and (from secondary) self-directed	Pre-primary through post-doctorate but mostly in- and non-formal (interwoven with life)
Life	Comprehensive and continuous	All of the above plus family, sport, leisure, religion, politics, community, military, protest et cetera et cetera (interwoven with education)

It is argued that "constructing multiple entries, transitions and bridges" connecting education, training and work (Carton & Mellet, 2021) is a misguided and ultimately unachievable ambition. There being two distinct continua, as illustrated in Figure 1.

Figure 1. Two distinct continua

Education Exploited as Preparation

Across the millennia, education has been misapplied in the service of particular religious, magical, military, ideological, empire-governing, social justice, ecological and economic development objectives. Irrespective of how noble the intention – enabling children to become good citizens, or to overcome inequalities in access to "decent work", or rebuilding our relationships with each other, with the planet and with technology – any such manipulation is just one small step away from utilising education in the production of child soldiers or pre-pubescent chimney sweeps.

Much of that which is taught in schools is of, at most, marginal relevance to the likely livelihoods of the students involved. Which is just as it should be. Based upon millennia of human experience, the work that most adults are likely to be doing a decade or so hence will be, now and as it has always been, be despicable and dehumanising drudgery. If a youngster's destiny is to break dusty bricks or carry impure water for a hundred thousand or so adult hours, all the more reason to ensure that the time spent in school should be extensive, exhilarating and entertaining (and entirely un-work-related).

For we do our students a serious disservice if we treat them predominantly as future adults. It is what they "are" rather than what they may "become" that is significant. Education is not a preparation for a career, nor for citizenship, nor for life in general, any more than going to the beach or the bowling alley or the cinema is a foundation for something else. Any more than Retirement is preparation for Death. Education is education. E ≈ E.

Education's Forthcoming and Fundamental Transformation

The essential e-lived existences of learners of all ages necessitate and make possible an E that embodies the perpetual duality of contemporary consciousness, incorporating, integrating and building upon the synergistic coexistence of the online and the face-to-face. Digital technology offers incredible potential to develop curiosity, creativity and resilience: it has the potential to be a vehicle for inspiring and engaging learners. But EdTech is currently characterised by vast investment, widespread hype and, as yet, minimal achievement (Douse, 2022a). The underlying problem is one of applying third millennium technologies in second millennium settings: driving a Formula One vehicle along ancient cart tracks.

Education, as presently practiced worldwide, is also the enemy of equity, despite voluminous policies and myriad political speeches to the contrary. Schooling is characterised by misery, boredom, bullying, deceit, anxiety, humiliation, brutalisation, ethnic – and many other types of – discrimination, religious – and many other forms of – indoctrination, sexual – and many other kinds of – exploitation, and by testing to destruction. It should not – and need not – be like that.

Performance-comparison-driven schooling must be relegated to the dark (i.e. pre-digital) ages. A decade or so from now, people will wonder, with horror and amazement, at the way in which early-twenty-first century children and young adults were subjected to examinations and assessment, along with their teachers being prevented from teaching by a never-ending requirement to mark, categorise and report.

Over half a century ago, the then UNESCO Deputy Director General (as well as offering an early reference to the "Education Continuum"), recognised that "our young students clamour to be given some responsibility, some right to form their own judgements, more right to discern, some right to take part in the own decisions about what to learn and how to learn" (Adiseshiah, 1970,p6). As argued elsewhere (Douse & Uys, 2020), from secondary schools onwards, the learners should lead, extending even unto curriculum. Teachers will then, we contend, come into their own in providing qualified support, facilitation of learning and personalised encouragement – but no longer be involved in controlling, accrediting, punishing or being the sole founts of knowledge.

The Parameters of Projects

Doubtless, the five well-intentioned projects cited (Carton & Mellet, 2021, p. iv) in relation to "discontinuities" which, those authors contend, "create and reinforce exclusion and inequality for marginalized segments of the population" provided some immediate and welcome benefits to the samples targeted. Almost certainly the re-integration of members of these target groups (Roma in Bosnia and Herzegovina, young people in Niger and Colombia, etc.) into what the authors refer to as the "standard" journey between education, training and decent work proved successful in terms of each project's verifiable objectives: any other outcome would be surprising. On their own limited terms, most projects are (at least partially) successful (particularly as perceived by their designers). But who can pretend that the overall challenges faced by the Roma, by displaced persons or by other disadvantaged categories were significantly and sustainably solved by any of these interventions?

As foundation director of Australia's Disadvantaged Schools Program in the 1970s (Douse, 2022b), one of the present authors (Douse) became familiar with several hundred school and local community engendered projects aimed at ameliorating educational inequity and understanding its dynamics. Most of those projects achieved (local and limited) success against their planned indicators. Nevertheless, an examination of socio-economic data for the Australia of half a century later still encounters that same imbalanced and inequitable pattern of earnings, housing, health, life expectancy, amenities and general well-being that existed when that Program was devised. And so, it was with the United Kingdom's "Educational Priority Areas' initiative and the United States' "Compensatory Education" 1960s/70s interventions: many young people significantly assisted – no noticeable alteration in the overall inequity.

Similarly, few would (at least publicly) oppose human rights, non-discrimination, social justice, respect for life, human dignity, cultural diversity and an ethic of care, reciprocity, and solidarity in the new social contract discussion (UNESCO, 2021). However, it is the perception of education as the instrument for building those "peaceful, just, and sustainable" futures for all (UNESCO, 2021,p.viii) that rings untrue. For education, as already emphasised, is not a "means", it is an "end", while training is a means to another end (work).

Indeed, despite all the initiatives and interventions of the last half-century, inequalities have magnified and, from 1970 to 2021, the external debt of the poorest nations rose on average from 55% of their GDP to 175%. The pandemic has accelerated the crisis: 135 out of 148 nations in the poor world are now classed as "critically indebted" (Monbiot, 2022). We fool ourselves and deceive the world's learners and teachers if we continue to pretend that, despite all the evidence, the inequities of work and of life may be affected significantly and sustainably by educational projects, programmes, plans or policies.

Education and Work: The Vital Non-Relationship

As the 2030 Agenda for Sustainable Development was being laid out, it was clear that "new forces are transforming the world of work... countless opportunities lie ahead to improve the quality of working lives, expand choice, close the gender gap, reverse the damages wreaked by global inequality… seize the opportunities presented by these transformative changes to create a brighter future and deliver economic security, equal opportunity and social justice – and ultimately reinforce the fabric of our societies".

Taking this forward, the Global Commission on the Future of Work proposed strengthening the social contract by "placing people and the work they do at the centre of economic and social policy and business practice… a future of work with dignity, economic security and equality" (International Labour Organization, 2019, p. 12). While this enlightened discussion focusses on what Learning should be about from the important but limited perspective of what Work should be like, the report's casual and erroneous expansion of investments in the institutions of work into the …institutions of education (International Labour Organization, 2019, p. 12) is as remarkable as it is misguided. Other than that, in terms of vision, the Commission got it right.

Figure 2. Inter-relations between work, training, education and learning

Bringing the marketplace into the schoolroom devalues the invaluable, transforming a universal right into a tradable commodity. If education is defined in pecuniary terms and aimed at economic goals, it will inevitably be regarded as a function of the market and, consequently, "the world of work will come to colonise the space of the school" (Douse, 2013). Only when it is recognised that Education (as opposed to Training) is about self-realisation (as opposed to acquiring marketable skills and the getting of certificates), will "the profiteers be chased from the temples of learning and the laughter of children come to drown out the clacking of the cash registers" (Douse, 2005).

Disadvantage does not arise from discontinuities between education, work and life but from the incapacity and unwillingness to address underprivilege, inequality and exclusion within society, of which the workplace is a crucial element. The well-intentioned ambition of "challenging and undermining these discontinuities by implementing different types of education, training and work Continuums" (Carton & Mellet, 2021) is a false trail. Let education – learner-directed, lifelong and work-unrelated – flourish. Education's forthcoming fundamental transformation, given impetus by COVID-19, is upon us. Effectively applied EdTech makes it feasible, our common humanity makes it imperative and our example as educators may encourage and embolden the efforts of those involved in the entirely separate fields of training and work.

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The Evolution of Credentials: A Call to Action to Rethink the Education–Training–Work Continuum

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Summary
The fast-paced evolution of skills recognition and validation modalities has the potential to harmonise the education–training–work continuum through pathways better suited to lifelong learning within varying skills equilibrium contexts (ILO, 2022; UNESCO, 2022). In this article, we examine the increasing fluidity in skills recognition provided through an evolving credentialing ecosystem characterised by the coexistence of formal, micro and digital credentials.

Keywords
Credential
Platform
Digitalisation
Sustainability
Data Privacy

The Evolution of Credentials: A Call to Action to Rethink the Education–Training–Work Continuum

Education, training, and work have coexisted in diverse, sometimes intersecting, sometimes complementing and sometimes even contradicting continua since the first industrial revolution in the eighteenth century. In recent years, the reinterpretation of the term "credential" has become a proxy discussion for the realisation of the concept of lifelong learning, introduced nearly six decades ago (Faure et al., 1972). At that time, the case was made for formal learning to be "supplemented by other aspects of social life, institutions, working environment and leisure, as well as by the media". The Faure report established the notion of the learning society firmly alongside lifelong learning, with a strong focus on the right of individuals to learn. In the late 1990s, Delors (UNESCO, 1996) expanded the concept of lifelong learning further to include citizenship and personal fulfilment across four pillars of learning: learning to know, learning to do, learning to be and learning to live together. In 2021, the International Commission on the Futures of Education (UNESCO, 2021) proposed a new social contract for education premised on the right to quality education throughout life and strengthening education as a public endeavour and a common good. In their report, the commission argued for credentials that "are at the intersection of education and labour markets", "a sole focus on the qualification itself is insufficient" (p. 43), and importantly, also advocate for flexibility "in the face of uncertain employment futures" (p. 45).

More recently, in 2022, the Marrakesh Framework for Action on Adult Learning and Education (ALE), adopted by 142 countries, recognises that the linear education-to-work transition that was the dominant pattern for decades is becoming less relevant as, increasingly, adults follow complex trajectories over their working life. In this context, the task

of ALE, through the shared responsibility of stakeholders, is to provide – in a flexible way – equitable acquisition of relevant knowledge, competencies and skills throughout the life course, including vocational guidance and other learning support to employment, decent work, career development and entrepreneurship. This trajectory has not been limited to UNESCO, with several international agencies focusing research and effort in the same direction (Cedefop, 2022; ILO, 2022; ILO & UNICEF, 2022; NORRAG, 2022).

In our work, drawing on the 2021 global consultation process preceding the Futures of Education Report (UNESCO, 2021), as well as the common definition for micro-credentials that was developed by an international panel appointed by UNESCO, we have moved towards an illustrative definition of the term "credential fluency" (UNESCO, 2022, p. 3):

> *The increasingly seamless interrelationships between the recognition of formal, non-formal and informal lifelong learning made possible through a user-centric approach, digital forms of recognition, improved data interoperability, and closer alignment between learning and the world of work.*

Today we live in an industry 4.0 era characterised by globalised and digitised production processes which coexists with an informal economy, a rural and subsistence economy, and an unequal world (Desmarchelier & Cary, 2022), accelerated by the COVID-19 pandemic and further impacted by migration and forced mobilities, armed, climate and geopolitical crises. In this context, it is as if our policy instruments have not kept pace with the fast-changing environment. This triggered, for example, the UN Secretary-General's "our common agenda", including the "transforming education summit" and "summit for the future". All of these take forward the calls for a new social contract for education and work framed by the Futures of Education Report (UNESCO, 2021) and the Global Commission on the Future of Work hosted by the ILO (2022).

In our view, it is for the first time that an approach such as this will fully realise the vision of lifelong learning espoused by Faure (1972), expanded by Delor (UNESCO,1996) and situated in our current context through the International Commission on the Futures of Education (UNESCO, 2021) and the Marrakech Framework for Action. In our view, a call to action to rethink the Continuum should be constructed across three pillars: digitalisation of education, credentialing and a reimagined future encompassing sustainability in its broadest sense.

The first pillar is digitalisation, which presents the Continuum with the opportunity to collaborate within a shared ecosystem. Historically, the supply side discourse has been dominated by education and training providers, using artefacts such as qualifications, curriculum and examinations. In contrast, the demand side is represented by employers and employees, with their own narrative and artefacts, such as occupation, workplace organisation, work-based learning, competency-based assessment and more. The digitalisation of education, specifically through the unlimited potential of connecting learning spaces and making accessible the codification of knowledge, skills and competencies in the form of learning outcomes is, in our view, having a conjoining effect globally. In connecting learning spaces and sharing a common language, the world of work and the world of education and training are becoming more seamless, even more so as the credentials designed and issued on either side of this continuum are increasingly commonly interpreted. There are, of course, also many risks with this trend (Goger et al., 2022). We are certainly not arguing that it is necessary for all learning to be credentialled nor that the digitalisation is equally distributed across and within countries.

The second pillar is credentialling. Credentialing is an essential proxy for society regarding the value and status of learning. It can, and will, lead to deepened inequality if not guided through globally agreed upon principles that foreground education and lifelong learning as a public good and internet access as a human right in the near future. The UN's Sustainable Development Goals (SDGs) clearly demonstrate these correlations between lifelong learning and the planet's sustainability. Globally, countries are still making structural reforms to their qualifications systems. Progress and limitations of such reforms have been examined on several occasions. In our work, we have examined this global movement through the lenses of generations of reforms. We now see an emerging fourth generation of qualifications framework encompassing the Continuum through new types of credentials such as micro-credentials, badges and learning portfolios (Commonwealth Tertiary Education Facility, 2022; European Training Foundation, 2022). This ecosystem recognises the diversity of learning spaces, the variety of learning outcomes and the difficulty of fitting all learning outcomes into a formal qualification while not excluding the possibilities of stacking those learning outcomes into a qualification. This ecosystem is supported by digital technology, such as credentialing platforms, interoperability technology, artificial intelligence and other technologies. It also requires rethinking the quality assurance systems, which heavily rely on key institutions and actors, such as qualification and accreditation authorities, assessors, and verifiers.

More distributed credentialing systems involving different learning spaces, actors and stakeholders require new approaches that can draw on the potential of community of practices and leverage the technology edge. The intersection of credentialling and digital technology is an evolving space.

Several examples are already shaping this intersection, for example, the US-based Credential Engine offering transparency and visibility of credentialling ecosystem. Their 2021 Report shows the shifting credentialing landscape in the US, while another example is the European Union. Through major initiatives such as European Qualifications Framework, Europass, and the European Digital Credentials for Learning, the European Commission is defining a continental credentialling ecosystem supported by technology and applying highest standards for data protection and security. A final example is the work of organisations such as Coursera or LinkedIn that provide a global perspective regarding demands for skills and credentialling in the workplace through their annual analytic reports.

A reimagined future is the third pillar we have identified. Drawing again on the UNESCO International Commission on the Futures of Education (2021, p. iii), this is a possible future:

> *…grounded in human rights and based on principles of non-discrimination, social justice, respect for life, human dignity and cultural diversity. It must encompass an ethic of care, reciprocity, and solidarity. It must strengthen education as a public endeavour and a common good.*

Connecting the Continuum lies at the heart of this future vision. We believe it may be possible to realise this vision for the first time in human history. Increased digitalisation, noting the caveats, viewed through the lens of sustainability, noting the multiplicity of the concept, provides the pathway to fully realise lifelong learning by connecting the world of work with the world of education and training. This vision requires both a national and international policy agenda. For national policies, the priority should be creating, incentivising, valuing, and funding flexible learning pathways and credentialing systems within and between education, training and working. It should include rethinking national qualifications systems, for example, by integrating new types of credentials such as micro-credentials, badges, skills passports and others and recognising the importance of recognition of prior learning for all sections of the population, particularly disadvantaged and underrepresented groups. These will also require rethinking the established quality assurance frameworks designed for formal learning spaces and settings.

Another dimension is related to the digitalisation of the continuum, where a critical balance must be struck between regulating the digitalisation of the continuum and incentivising data openness to democratize data as an educational resource and improve transparency in education governance. The issue of data ownership is included to prevent exploitation or commercialisation of learner credentials and data, particularly by companies abroad with no local economic impact. For the international community, the momentum created by the Transforming Education Summit held in New York in September 2022 presents a unique opportunity for countries to join forces to face some of the significant global challenges affecting our world and our education, training and work systems. First, it is time to act to enhance international cooperation and solidarity for strengthening the human rights framework regarding lifelong learning. This process should explore the most appropriate ways to translate the vision of a right to lifelong learning with the Continuum at its core. Second, it is urgent to develop international resources for learner credentials, data protection and security and, more broadly, a global Digital Credentialing Commons to promote open access to quality digital learning and credentialing. The UNESCO Recommendations on Open Education Resources and Ethics in Artificial Intelligence are a sound basis for this work.

New forms of credentialing lie at the heart of a reimagined future. Time will tell if we have the courage to stay true to this new vision. We certainly have the means.

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Governance Infrastructure of Education–Training–Work Continuum: Some Missing Dots

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Summary
This chapter proposes a governance infrastructure to guide and coordinate six education–training–work transformations, namely, human capacity and demography; consumption and production; decarbonization and energy; food, biosphere, and water; and smart cities and digital revolution (The World in 2050 Initiative Report, 2018)[1].

Keywords
Education
Training and Work Governance
Four-level Governance Infrastructure
Micro-, Meso-, Macro- and Meta-levels
Linking Governance Mechanisms
Education-training-work Continuum

Introduction

The performance of an educational system should be measured against criteria that go beyond enrolment rate, number of schools and teachers and number of degrees granted, which are all output measures. Output measures as such are important but only make sense if these outputs generate positive outcomes such as the well-being of students and of the society as a whole. The former can and should be measured by the level of competences – skills, knowledge, abilities (SKA), employability and earn ability, and the latter, by total human capital stock, gross national productivity and national positioning in the division of labour within Global Supply and Value Chains. The education–training–work continuum (Carton & Mellet, 2021) is an innovative proposal about how to remedy current shortcomings and waste of resources.

The Education–Training–Work Continuum and Need for a Governance Infrastructure

An educational governance system based only on input or output measures is neither satisfactory nor effective. An innovative and adaptive governance system needs to monitor the outcome and impact in order to know whether an education–training–work system has achieved its mission.

The necessary institutional arrangements include a national Continuum information system as part of the Continuum governance infrastructure. A Continuum information system focuses on the collection of data necessary for decision-making and policy making at different scale and aggregate levels.

Social performance is the second rationale in setting up a robust Continuum governance infrastructure. Social justice is necessary to maintain peace and harmony, which is achieved through non-discrimination rule. “Leaving no one behind” (LNOB) is a key tenant of the 2030 Agenda for Sustainable

Development. Others include participation, transparency and accountability of the Sustainable Development Goals (SDG) processes. A Continuum governance infrastructure is needed to provide the guardrail for the implementation process.

Functionality of an Education–Training–Work Continuum Governance Infrastructure

In the context of continuum transformation and universal application, a robust governance infrastructure should help identify the gaps, inconsistencies and misalignment of the Continuum at different aggregate levels and operational contexts. Quality Education for All[2] must go beyond simply increasing access to education and school enrolment rates at all levels, especially for girls, and should include ways to improve employability, decent work, sustainable livelihoods, and countries' sustainability.

A Four-Level Structure for an Inclusive Education–Training–Work Continuum Governance Infrastructure System

The structure of a successful education–training–work Continuum governance infrastructure is divided into different levels of control and governance capacities in order to achieve agility, coordination and adaptability. Such a multi-level structure is necessary to ensure that governments maintain public trust and meet the demand of their citizens that school leavers are enabled to get access to socioeconomic opportunities.

The proposed governance structure consists of four basic levels, namely, educational enterprise, or micro level; sector/industry, or meso-level; national policies, or macro-level; and global agreements and guidelines, or meta level (Figure 1). Each level forms an input–output link and feed-in and feedback loops.

Figure 1. Four-level governance infrastructure for Continuum operation

Source: based on Saner & Yiu, 2019

Table 1 defines the characteristics of the four-level governance structure.

Table 1. defines the characteristics of the four-level governance structure

	Levels	Place of learning, activities and/or decision making	Actors	System requirements	Outcome indicators and measures
Practices	Micro level	• Learning within formalized settings, e.g., schools, colleges, universities · In-company or in-organization training · Informal learning e.g., skill acquisition, management courses	• Established educational institutions · Training departments of the organizations and companies · Training providers (public or private)	• Partnerships with local stakeholders, including economic actors for formal education · Mechanisms for effective continuous learning in order to maintain employability · Return on investment for individuals and for organizations	Individual level · Life skills and equivalent of SKAs for specific work contexts · Getting a meaningful job one year after graduation Institutional level · Lower level schools: rate of educational advancement after graduation, or finding a placement in organisations · Tertiary and higher education: rate of employment one year after graduation · Companies: performance improvement and results (Kirkpatrick, 1959) [1] · Reduction of performance gaps at individual employee, department, and enterprise levels

	Meso level (sectoral)	• Qualification training for adults organized by sector associations, e.g., Coding, Oracle, SAP, electrician, project management, organic farming · Learning within workplaces which include apprenticeship programs, e.g., insurance, lab technicians	• Industrial associations for specific sectors · Private companies offer qualification training to boost human resources · TVET with a workplace apprenticeship or practicum component	• Occupational standards or national classification system (Yiu & Saner, 2009) • Mid- and long-term development plans as guidance for workforce development • Partnerships among enterprises, government and training and education providers	• Increasing workforce supply of specific SKA at the novice level through apprenticeship and move onto more advanced levels of competence [2] acquisition • Rate and time of new technology adoption • Emergence of new businesses with new products or services • Organisational capacity to participate in new markets
Policies, regulation	Macro level	National educational and economic policies and educational system	• Ministry of Education (producer/supplier) · Ministry of Labour (intermediary client) · Ministry of Economics (buyer/ customer) · Parliament (oversight)	* From the perspective of the 2030 Agenda, the national education policies in achieving SDG 4 and its vital inputs/ contributions to the attainment of other SDGs * National competitiveness * Gross national productivity * Market conditions	* *Education and employment policy evaluation* * Soft evaluation: HLPF SDG 4 quality education, and 8 economic growth and decent work; links to 17 (sharing technology-learning), 5 gender equality, 10 between and within country equality * Measuring, e.g., OAQ and other evaluations * FDI attractiveness and human capital * Human capital assessment * Do young get education that prepares them for entry into job market? * Are they prepared to fulfil their role as a civic citizen? * Does education lead to entrepreneurial innovation?
	Meta level	• Technical support and policy advice regarding countries' educational outcomes and learning architecture for formal education, informal, non-formal education and LLL · Benchmarking and feedback · Internationalization of educational services (Lim & Saner, 2011; Saner, 2015)	• UNESCO, OECD, ILO, UNDESA-SDGs, SDSN · WTO education and trade in education agreements · Ministry of Foreign Affairs, Ministry of Trade and Ministry of Education	• Border condition: openness of educational services and products and allowing for foreign education providers to invest and operate in other countries · Availability of national data and UN access · Comparability of data	Benchmarking assessment regarding education attainment, for example: PISA (OECD), The Global Education Monitoring Report (UNESCO), IEA [3], PIRLS [4], TIMSS [5] The ILO's World Employment and Social Outlook Report 2022 [6]

[1] https://www.mindtools.com/pages/article/kirkpatrick.htm#:~:text=What%20Is%20the%20Kirkpatrick%20Model,Learning%2C%20Behavior%2C%20and%20Results

[2] https://medium.com/@anhminhdo/4-levels-of-competence-fb1bbddd945d

[3] The International Association for the Evaluation of Educational Achievement (IEA) is an international cooperative of national research institutions, governmental research agencies, scholars, and analysts working to research, understand, and improve education worldwide. https://www.iea.nl/

[4] Progress in International Reading Literacy Study 2021 (PIRLS 2021): https://www.iea.nl/studies/iea/pirls/2021

[5] 36TIMSS and PIRLS are international assessments that monitor trends in student achievement in mathematics, science, and reading. Currently 70 countries participate in the assessments, which have been conducted at regular intervals since 1995. https://timss.bc.edu/

[6] https://www.ilo.org/global/research/global-reports/weso/trends2022/WCMS_834081/lang--en/index.htm

The four-level governance structure connects the dots and allows the education-training-work continuum system to operate as the "new normal." To govern such a complex system of the continuum, the governance mechanism embedded in the different levels or scales and different local contexts needs to be equipped with three fundamental pillars:

1. Shared vision and measurable indicators,

2. Universal and verifiable operational procedures, also known as Standard Operating Procedures (SOPs)[3], and self-adaptive capacities to be effective and transformative, and

3. Mechanisms that link different levels of the continuum and ensure a governance infrastructure that is integrated and purposeful. Such a link is also known as a linking pin in the organizational theory literature, prescribed as "principle of supportive relationships" (Likert, 1961)[4] and performs the integration function for greater performance.

Criticality of the Linking Mechanism for an Effective and Integrated Education-Training-Work Continuum Governance System

Maintaining alignment of different levels is not guaranteed. Strategic intent and the operational practices of education programs can be very much disconnected and all components of the continuum can end up being managed and treated as separate silos with varying degrees of boundary intensity. Without planned linking pin mechanism in place, needed performance feedback from one level to the next will not occur and will negate the self-corrective and learning function of such a governance system. Consequently, this disconnect may render the continuum with suboptimal results.

The tracking and the monitoring of a SOP, common in standard quality management practices, thus serve as the guardrails of an the education-training-work continuum governance infrastructure that generates systematic feedback to regulate and correct deviation. SOPs at the micro level feed into meso level, while the meso level feeds into the macro level, and so on, forming a networked quality assurance system that will be able to support continuum implementation and create desired impact at scale.

Conclusions

The education-training-work continuum should be understood as an integrated system that channels education and training and LLL towards productive outcomes. However, a robust and databased tracking system is necessary to support the governance function of a multi-level continuum-based education and learning system.

Standardization is needed to govern the complexity of a responsive multi-layered education and learning system that crosses its traditional boundaries and works in partnership with other sectors, such as labour affairs, economic affairs and even trade.

A macro information system should be constructed for data collection, storage and analytics in order to achieve quality education through a continuum with upward and downward feedback loops and transparent relationships between education sector and other stakeholder groups in fulfilling the mandate of quality education for all and inclusive socio-economic mobilities.

Endnotes

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The Education–Training–Work Continuum for Socio-Economic Inclusion: The Case of Singapore

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Summary

A frequent focus of contemporary skills policy is the need to improve the quality of and the access to learning provision. This policy priority may take attention away from an equally important need to improve the "education–training–work continuum", or simply put, skill-based job transitioning. This paper illustrates that by designing skills provision that is linked to the demand for skills, the linkage between provision and job transitioning can be achieved.

Keywords

Skills Policy
Job Transitioning
Lifelong Learning

Introduction

The education–training–work continuum is key to job transitions whether the transition is intended for school-to-work, green jobs, better and skilled jobs, decent work and sustainable development (ILO, 2019; UNESCO, 2021). However, there is no guarantee that if we do well in education provision, the benefit will be automatically translated into impacts in the world of work.

Indeed, this uncertainty has been intensified as a result of three fundamental challenges. First, the impact of rapid technological change and globalisation means that the need for re-skilling is happening more often. Second, the tendency for a "silo" approach to policy making may increase the barriers to creating an effective synergy between improving education provision (e.g. under SDG 4) and the need to have better jobs and economic growth (e.g. under SDG 8). The two objectives need to be considered together because the former focuses on the "supply side" while the latter concerns the "demand side" for skills. Linking the two, or at least, a better link between the two, will no doubt improve education-training-work continuum and SDG progress over all. Thirdly, job transition is no longer a pure labour market or employment matter. Gone are the days when "more jobs" might suggest a good policy outcome. Now, we have to question whether, qualitatively, new jobs are likely to produce benefits in environmental, social, well-being and economic terms, simultaneously. In this brief article, we will use the Singapore example to illustrate how useful lessons may be learned in this regard. Specifically, we will cover the following:

1. The general problems of discontinuity between education and work.

2. Singapore's lifelong learning provision under the SkillsFuture policy has enhanced the education-training-work continuum, but it needs other components beyond just better education provision:

    a. Education, though very successful in Singapore as reflected in PISA, is not a stand-alone institution.

There is a close link between lifelong learning, social and work/economic policies.

b. There is the need to examine the role of the state in creating the motivation for the demand for high-skilled jobs, linking the need for continuing education and work, as well as other broader goals, such as good jobs and inclusivity.

The Potential Problem of Discontinuity between Education and Work

Against the backdrop of the need for a greater equitable educational future, digital disruptions, uncertainty in the future of work and the need for a new and transformed education agenda, the UNESCO (2021) report has argued for a new "social contract" for education (p. 3):

> *This new social contract must be grounded in human rights and based on principles of non-discrimination, social justice, respect for life, human dignity and cultural diversity. It must encompass an ethic of care, reciprocity, and solidarity. It must strengthen education as a public endeavour and a common good.*

The report – an exercise that has engaged a huge number of stakeholders in government, education, interest groups (e.g. human rights), researchers, societal networks and international agencies – is essentially calling for a collective effort between governments and their stakeholders to revamp their education system, covering pedagogies, cooperation, curricula improvement, quality of teacher training and links between schools and higher education. The main focus is on the "new approach" to delivering education. However, while this is important, the report has little coverage on work, especially from the individual perspective of work and job transitions, e.g. "How would a new education system support my own future work needs?". In this regard, the report does not deal with the education-training-work continuum and the likely impacts of not paying attention to it. The unintended impression of the report is that only if we could do education better, we could solve all other problems. Unfortunately, environmental challenges, the potential downsides of globalisation and structural inequality carry their own dynamics. They all have to be connected.

An earlier report by the OECD (2018) also emphasised the important role of education. Like the UNESCO report cited above, education is seen as a critical tool for tackling socio-environmental-economic challenges, all at once. The report focuses on a "shared vision of education in 2030 (p. 3):

> *Children entering school in 2018 will need to abandon the notion that resources are limitless and are there to be exploited; they will need to value common prosperity, sustainability and well-being. They will need to be responsible and empowered, placing collaboration above division, and sustainability above short-term gain.*

It further argued that (p. 4):

> *Education needs to aim to do more than prepare young people for the world of work; it needs to equip students with the skills they need to become active, responsible and engaged citizens.*

With the above agendas, the main content of the report is the need to have what the report calls the "transformative competencies" (p. 4), which is expected to support the future needs of young people through an improved education provision that can deliver: (a) a new set of values, (b) ability to reconcile tensions and dilemmas and (c) taking responsibility. Notice, like the UNESCO (2021) report, it does not deal with work or the need for the education-training-work continuum.

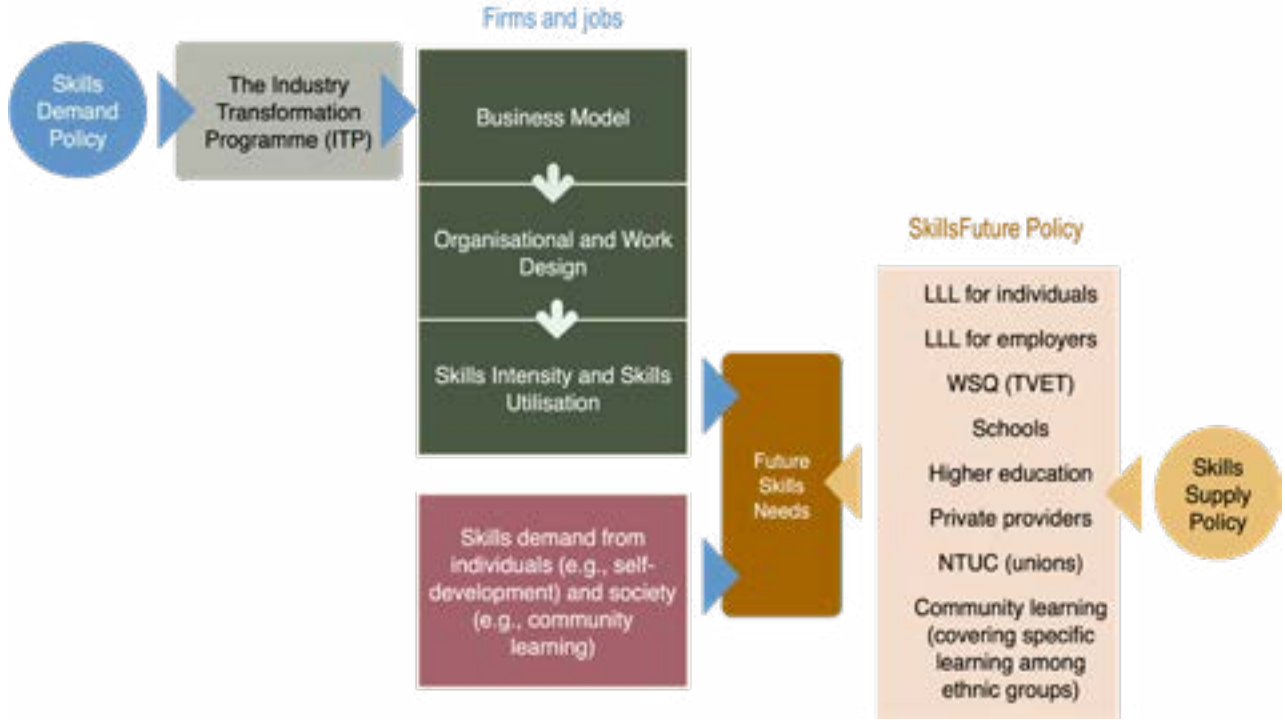
Much of narrow focus on education as the main tool to deal with different SDGs may come from the belief that education is the most accessible tool available to governments and their immediate stakeholders. But then, by not considering the continuum, how education can get to other goals remains uncertain. The Singapore experience may throw light onto the possibility of doing more than just "better education".

Singapore's Lifelong Learning Provision under the SkillsFuture Policy

The SkillsFuture policy in Singapore is the backbone of the country's socio-economic strategy. Within this strategy, lifelong learning is the main delivery vehicle, integrating the different components of education, work, skills, learning, self-development, industrial development (e.g. innovation and economic growth) and social development. However, it should be noted that when SkillsFuture was launched in 2015, there was no specific focus on the continuum. Instead, SkillsFuture was designed for a rather different purpose. It is meant to replace the previously different piecemeal reforms in education (including TVET), adult learning and industrial strategy with an "integrated structure" that links educational elements from schools to adult learning, from personal development to the workplace. It was also designed to support the "demand side" for skills, namely, the Industry Transformation Programme (ITP). Thus, it is important to emphasise that because of the links between the demand for and the supply of skills, SkillsFuture has emerged with features that can be seen as providing for the continuum. Those links are not necessarily forming a continuum, though skills supply is deliberately connected with the world of work, the changing demand with career change and more.

Figure 1 gives a quick access to understanding how lifelong learning under SkillsFuture can create the education-training-work continuum.

Figure 1. The overall skills system in Singapore



Source: Author.

Figure 1 shows that on the skills demand side, the ITP has 23 industry sectors which are then organised into six clusters[1]. On the supply side, all education and training bodies and institutions are supported and guided by the objectives of SkillsFuture, including lifelong learning.

The system's key points are as follows:

- The overall skills system has a focus on meeting both current and future skills needs at the individual and firm levels (or for that matter, at the sectoral level).
- Each of the 23 sectors are supported specifically by SkillsFuture Singapore (the agency that owns and delivers the SkillsFuture policy).
- The overall system has lifelong learning as the main vehicle for delivering skills flexibility, adaptation and deep-skilling for future skills needs.
- SkillsFuture also supports individuals who are engaging in "skills mastery" which is vital for career building, job transition, innovation and self-growth.

In practice, SkillsFuture is both lifelong and life-wide. As a result, it also creates career pathways by default, though arguably these may not form a continuum in the strictest sense. Figure 2 shows that from the learner's perspective, SkillsFuture can provide various linkages and support between the different stages of skills development. In the context of SkillsFuture, the linchpins for the continuum seem to be the strong support for career development and job transitioning. Therefore, SkillsFuture also provides two online portals for individuals who are engaged in lifelong learning: (a) the MySkillsFuture portal for finding training/learning opportunitie, and (b) the MyCareerFuture portal for career development and labour market or job transitioning. Note that Figure 2 is indicative as the range of learning supported by SkillsFuture is much broader than shown. Take for example, courses approved by SkillsFuture Credit (an individual learning account) include numerous short courses and online provision (e.g. MOOCs), credited and non-credited, amounting to thousands of eligible learning opportunities.

Figure 2. Lifelong learning provision under the SkillsFuture policy

Source: Author.

The Singapore's Experience in Relation to the continuum: Some Concluding Remarks

Exactly how far has Singapore come to achieving the continuum? This is a hard question to answer because SkillsFuture was not created for that particular purpose. However, it seems that continuums have emerged because lifelong learning is an 'organizing principle' behind skills provision at all levels. In addition, the linkages can be quite diverse if the skills system is set up to deal with skills supply and skills demand across many industrial sectors specifically. As such, this also means that lifelong learning – at least in the context of SkillsFuture – should not be seen as a pure "educational" agenda, but an infrastructure to deliver a capacity for handling change and future uncertainty.

More generally, to improve the linkage between SDG 4 and SDG 8 (perhaps even with other SDGs), the education-training-work continuum is an important consideration. Arguably, the policy design for education ought to be "grounded" in a practical manner, and be regarded as a component within a system of many "moving parts". Then the question may become "What other parts does education move with?", though inevitably, the answer to this question will vary from country to country.

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Endnotes

1. See https://www.mti.gov.sg/ITMs/Overview for details of what ITP does. But briefly, the programme provides a sectoral approach to supporting innovation, productivity and international expansion (for some sectors) with a view that these objectives are generally done via higher value-added and high-skilled jobs.

Searching for Quality in Work Training Programmes in Vulnerable Sectors: Digging into the Basics

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Summary

The article stems from contexts similar to Mexico's where educational inequality and the lack of equity is very high and impacts a population that does not fit within a linear trajectory from education to training to work. We focus our argument on four strategies that may help to increase youth employability and set trajectories within a different continuum.

Keywords

Job Training
Work Training
Quality Education
Non-formal Education
Training Programmes

Introduction

School to work transitions often refer to life trajectories in which periods succeed one another: going to school and then entering the world of work. This linear pathway is unlikely to be in place today in many countries characterised by certain conditions, such as Mexico, where education inequality and inequity levels are very high. Children account for approximately 8 million people, educational lag (the population over 15 without basic education) totals nearly 26 million people and the education and work outlook for youths is unpromising. Broadly speaking, this is a large population group living in poverty, who left behind formal education and are looking for options that allow them to go back to school or that help them make the transition to the world of work.

This article argues that there are four strategies that have the potential to raise the quality of work training (WT) programmes, contributing to improving the employability profiles of individuals. Although these strategies do not necessarily bring youths back into linear pathways, they do promote better conditions that facilitate their transition into the world of work creating a different continuum.

Strategy 1

Collaboration among work training centres (WTCs), the public sector and secondary/high school institutions can strengthen the work training component in the secondary/high school curriculum.

This collaboration is born out of a basic situation, i.e. school dropout among youths at this level, stemming from social and financial reasons, including a lack of motivation for what is offered by this school level. This is why the aim is to enrich the curriculum by strengthening the work training component, either to motivate students or to raise their fresh graduate profiles.

The collaboration means that the WTCs take responsibility for delivering various workshops in the last school year of students' education (office automation, first-aid, carpentry and tourism, among others). This way, students get two

diplomas upon finishing high school: one that shows they have completed the required educational level and another diploma that attests to the technical studies taken. This improves the fresh graduate profile, helps to reduce dropout rates at secondary level and facilitates work transition processes.

This strategy is effective in raising the quality of the work training component within the secondary/high school curriculum grid; also, because WTCs are present throughout the country, this strategy makes it possible to respond to the various contexts' needs.

Strategy 2

The higher quality of the WTCs' can allow for targeting young and adult populations.

This strategy stems from the marginality that has characterised non-formal education programmes targeting low-income populations, so it responds to the need to enhance the programmes' quality, with an impact on curricular, pedagogical, institutional, contextual and other dimensions. The intention is for programmes to have a more powerful role that impacts on the individuals' employability and improves their life conditions.

In this sense, the following will be developed: multi-purpose courses; complementary contents and skills to enrich the programme; incorporation of socio-emotional skills to the curriculum grid; internships in companies to facilitate the transition into the world of work and acquire socio-labour and socio-emotional competencies; accompaniment of learners to help them stay in the programme; response to the needs of individuals in their various contexts, e.g. the development of a programme to help youths from an isolated area to form a music band; changes to a dressmaking workshop curriculum; trade training workshops tailored to the needs of the community, among many other features (Pieck, 2012; Pieck & Vicente, 2017).

All of these strategies encompass various levels, do not require high resource expenditure and are simple to implement. The aim is to enrich work training programmes through simple changes to make a bigger impact on people's life.

Strategy 3

Success can be achieved through the strengthening of institutional links.

Basically, this strategy consists of the generation of institutional links by the WTCs, which allows them to enrich their curriculums, add a curriculum plus and provide more comprehensive training.

This articulation can refer to various fields, which can range from labour to production and from sectoral to curricular. In this sense, links with financial institutions are a way to provide support for programme development, and links with entrepreneurial agencies seek to strengthen programmes by developing small enterprises. Likewise, articulation with government agencies facilitates preparing and occupying public spaces to offer courses, as well as supplying the necessary materials to deliver the workshops.

Ultimately, when a WTC develops links with other spheres, this leads to improving the programmes' quality and yields benefits to students by means of an enriched programme. This increases their employability profile and, as a consequence, their chances of getting a job.

Strategy 4

Education and labour guidance services can be provided for youths who are out of employment and out of school.

In virtually all developing countries, there are a significant number of young people who have seen their educational pathway truncated on account of financial, social, family-related and/or personal reasons. For most of these youths, their navigation of the educational system was interrupted – or postponed – in their life trajectories, so now they are faced with the challenge of the transition into the world of work. Unfortunately, this transition gets complicated due to aggravating factors such as little schooling, lack of work experience, marginal education trajectories, no work skills, young age, lack of social networks among other factors.

In this new life scenario, many youths find themselves in a situation of abandonment and lack of direction. In general, they come from low-income sectors and experience family disintegration, contexts of violence, unemployment, lack of productive opportunities etc. In these circumstances, they have to define their future life scenarios and, in this blind dynamic, they try to make their way, and it is as if they go "bouncing" off the various options that present themselves to them – be they work-, education- or training-related. In this "bouncing", the youths find themselves without the support that would allow them to steer their decisions, review their education and work options, and map out and envision their future personal and professional trajectories: they are "adrift" and, in the absence of a programme to guide them, they are forced to explore the various alternatives by themselves.

The purpose here is to highlight the importance of designing and implementing a programme to respond to the global problem of the transition of disadvantaged youths, by providing support in their labour market insertion and education system re-insertion process. The programme aims to provide continuous accompaniment to and support of the construction of alternatives for young people without basic

certification. It is a comprehensive programme that seeks to facilitate the passage of these young people into active life; it also has links to the world of work by way of internships, and it offers continuity in higher education. In addition, it seeks to promote the development of both technical and soft competencies, address the social problem areas of young people, guide the development of potential productive projects, support personal life projects and promote their reinsertion into the education system. The key is starting from a specific training policy aimed at this group of young people, with a view to facilitating their transition process. They are not left alone; they are not left adrift[1].

A defining feature of the programme is the advisory and support services that must be provided to young people at precisely this crossroads moment. It is an example of a different way of looking at training, one where the transition to active life is addressed comprehensively.

Conclusion

We believe these four strategies will help to raise the quality of WT programmes, improve fresh graduate profiles and employability, and facilitate processes of transition into the world of work. The strategies do not require large resource mobilisation, yet they will help to improve WT programmes that are channelled to young people living in vulnerable sectors.

Endnotes

1. See http://www.educacionfutura.org/jovenes-a-la-intemperie-la-ausencia-de-una-politica-de-formacion-e-insercion/. Two examples of programmes that have applied this strategy are the Training and Insertion Programme (PFI, by its Spanish acronym) of Cataluña, Spain and the "La Comuna" programme, with roots in Local Missions in France, which operated formerly in the City of Mexico from 1999 to 2008.

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Rethinking Education, Training and Work : Time for a Great Re-think ?

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Summary
Global conditions, trends and transformations often form the backdrop against which engagement with education, training and work occur. In particular, career and livelihood have been increasingly contrasted. Drawing upon the cultural preparation process model (Arulmani, 2014), and with illustrations from non-Western approaches to work, this essay will consider how bidirectional collaborations between career development and livelihood thinking could contribute to better well-being in the education, training and work interface/ continuum.

Keywords
Livelihood Thinking
Well-being
Career Preparation Process Model
Pandemic
Equilibrium

The Livelihood and Career Approaches to the Practice of Occupations

"Occupation" is a foundational human institution that has evolved over millennia. This essay suggests that while occupation exists in almost all societies, social philosophies, economic cycles, technological advances and natural phenomena have worked together to differentiate the practice of occupations into the livelihood and careerist modes of engagement. Livelihood orientations are ancient and perhaps go back to Neolithic times. Whereas career orientations, undergirded by a work ethic brought about by the Protestant Reformation (Weber, 1905/2002), followed by the Industrial Revolution is a relatively recent emergence in the history of work. Today, the common attitude toward livelihood is that it meets subsistence needs and is practiced by humbler (usually rural) folk, such as farmers, artisans and skilled workers. The careerist worker, on the other hand, makes a deliberate decision to engage with the tasks of the chosen occupation and willingly submits to its requirements because it is anticipated that such investment of effort will contribute to significant personal advancement. But over the last century of its existence, has the career approach to the practice of occupation lived up to these expectations? Is a rethink required?

The Great Rethink

This essay takes the public health crisis waxing and waning around us, as an example. What began as a seemingly innocuous infection spread across the globe and affected our ways of living and working, such that workers' attitudes to career and occupation have also been altered in unprecedented ways. Peri- and post-pandemic surveys of employment trends point to high levels of job loss. This has also had a cascading effect on schools, education and training systems, causing them to shut down for protracted periods or shift to online/hybrid modes of service delivery. A contrasting trend is also seen. Large numbers of workers are expressing deep disenchantment with careers they had intensely and successfully practised for many years. A prominent journalist, for example, stated, "That relationship was one of the many to fall apart in lockdown. In two years,

I have gone from an out-and-proud careerist to actively cultivating a mindset that might be called "anti-work" (Hunt, 2021, p. X). Surveys further indicate that millions of workers are using phrases, such as "toxic", "being trapped and exploited", "exhaustion" and "stressful", to describe their experience of work. In April 2021 alone over 4 million workers in the United States quit their careers (e.g. Matuson, 2021). This massive and unprecedented employee turnover has led management specialists, such as Anthony Klotz, to coin such phrases as "The Great Resignation", "the big quit" and "turnover tsunami" (Jorgenson, 2021). During the lockdowns, people have had the opportunity to introspect about the way they work and live their lives. In fact, we could say that The Great Resignation has been brought about by the opportunity for a "Great Rethink" (Arulmani & Kumar, in press).

Equilibrium

The sentiments that underlie statements such as these are so widespread that it gives us reason to ask ourselves whether such thoughts and feelings are merely the result of pandemic-induced emotional and cognitive fatigue or, in fact, point to deeper frustrations about how we engage with education, training and work. Arulmani (2014), in his cultural preparedness approach, proposed that cultural learning, enculturation and acculturation work together to create a state of equilibrium in relation to peoples' engagement with work. When work is fulfilling and satisfying, this equilibrium would be consonant with the person's well-being. By contrast, continual and unsettled difficulties in people's lives, accumulating over a period of time, could bring about a dissonant equilibrium.

Livelihood Thinking for Career Development

Stress and fatigue could underlie both livelihood and careerist orientations. It seems however that the deep of sense disequilibrium and the loss of well-being are reported more frequently amongst careerists. One of the themes emerging along with the great resignation is the search for a new and better career. However, would frustration and dissatisfaction reappear once the novelty of pursing a new career has faded? Is a more fundamental, attitudinal shift required? The sections below draw upon interviews by the author with careerists who made shifts to a more livelihood-oriented practice of occupation. Three themes are presented below that could shed light on the issues that surround rethinking education, training and work.

"We Promote Each Other": The Individualism–Collectivism Continuum

Education and training systems that lead to careerist orientations rest upon values that promote the autonomy of the self. The freedom of the individual for self-promotion is greatly valued. Career in this sense is rooted in an individualistic approach to life. Livelihood thinking lies more on the collectivistic side of the continuum. This excerpt from an interview with a food technologist who quit a high level position and returned to his family farm provides an illustration: "I"m working on a new way of processing fruit from our orchards. My earlier job too was about food processing. But to get ahead, I had to always compete and show I was better. Here I"m with my family, so it doesn"t matter. We promote each other". Re-examining the dynamics of competition versus collaboration, independence versus interdependence, and duty to the in-group versus personal rights could offer insights for rethinking education, training and work.

"At My Pace": Work Place Flexibility

The careerist framework requires work tasks to be performed in a specific location (e.g. office or factory), following scheduled work timings and other institutionally prescribed work norms. Livelihood thinking is such that separation between life and work is not as stark and little or no bifurcation exists between the home and work place. Domestic tasks usually integrate quite seamlessly into work tasks. Furthermore, the relatively greater informality of the livelihood workplace allows the worker a greater sense of ease and comfort when executing work tasks. When interviewed, a small holding farmer said, "The difference between you and me is that you have to finish your work today. I can finish today, or tomorrow or even after that! I can ask my wife to assist me when I need it. My children can be with me when I work. My work is hard. But I finish my work, at my pace". Interestingly, it is this flexibility that the careerist worker seems to have cherished the most when working from home during the lockdown years. At the time of this writing, Curtis (2021), in her post-pandemic survey of careerist workers, observed, "Workplace flexibility is the new money in today's post-vaccine economy. Working remotely, enabled many white-collar workers to feel like they no longer had to choose between their work, family and wellbeing" (p. X). Carrying forward such pandemic epiphanies post-pandemic, workers are even willing to quit their jobs if they are not allowed to continue this form of engagement with work (Matuson, 2021). While this may come with its own set of challenges, rethinking education, training and work could involve considering the implications of institutionalising hybrid work arrangements.

"It's Not in the Textbook, but It Is a Better Way": Alternate Epistemologies

In order to qualify to enter a career, the worker is expected to master a prescribed syllabus and demonstrate this mastery by successfully passing through various formal examinations. On the livelihood side, knowledge is not encoded in this manner. Poems, aphorisms, sayings and folklore could all be devices through which work information is coded and transmitted. Education and training occur

through observation, focussed conversation and guided practice in a master–apprenticeship relationship. One of our interviewees, a graduate in agricultural engineering, said, “At the end of the course, I was a master of theories but zero in application! No one in the course taught me how to do the job. During the pandemic I returned to my family village. Here, my grandfather watches me and shows me his way of agriculture. For example, he showed me his way to turn manure into compost. It is not in the textbook, but it is a better way”. Traditional systems of expertise can be intangible representations of a community’s learnings accumulated over long periods of time. Importantly, these bodies of indigenous knowledge do not atomise or unitise work tasks. They holistically address a wide range of concerns including food security, human and animal health, education, biodiversity and natural resource management. There is growing awareness (e.g. United Nations Interagency Support Group, 2014), that indigenous epistemologies can provide sound guidelines for the generation of hypotheses, the formulation of research designs and the creation of methods and systems for contemporary practice (Arulmani & Kumar, in press). Engaging with such alternative paradigms to gain broader insights could become an important agenda for rethinking education, training and work.

Conclusion

The purpose of this essay is not to argue for an easing up of work pressures. Instead, it is a call to reckon with the fact that the pandemic has exposed not just an immediate, but a chronic unhappiness, that has been many years in the making, causing the careerist worker to constantly grapple with dissonant equilibrium. This essay suggests that facilitating bidirectional collaborations between livelihood thinking and careerist orientations could help create education, training and work environments focused on welfare, comfort and security, contributing ultimately to states of equilibrium that are consonant with the worker’s well-being.

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